30M Infrared Internet Camera

ICA-310

User's Manual

Version: 1.00

Date: July. 2007

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Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio technician for help.

FCC Caution

To assure continued compliance. (example-use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the Following two conditions: (1) This device may not cause harmful interference, and (2) this Device must accept any interference received, including interference that may cause undesired operation.

Federal Communication Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm (8 inches) during normal operation.

R&TTE Compliance Statement

This equipment complies with all the requirements of DIRECTIVE 1999/5/CE OF THE EUROPEAN PARLIAMENT AND THE COUNCIL OF 9 March 1999 on radio equipment and telecommunication terminal Equipment and the mutual recognition of their conformity (R&TTE)

The R&TTE Directive repeals and replaces in the directive 98/13/EEC (Telecommunications Terminal Equipment and Satellite Earth Station Equipment) As of April 8,2000.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

CE Mark Warning

This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

WEEE Regulation

To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

Revision

User's Manual for PLANET 30M Infrared Internet Camera
Model: ICA-310
Rev: 1.0 (July. 2007)
Part No. EM-ICA310

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1. Introduction

This 30M Infrared Internet Camera is an inexpensive fully scalable surveillance technology. Because the 30M Infrared Internet Cameras can be plugged into your existing local area network infrastructure, you will potentially save thousands of dollars on unnecessary cabling.

The 30M Infrared Internet Camera is accessible via the LAN or Internet connection. Connect your 30M Infrared Internet Camera directly to a local area network or xDSL modem, and with Microsoft Internet Explorer you get instant, on demand video streams. Within minutes you can set up the 30M Infrared Internet Camera to capture a video sequence to a PC. The live video image can be uploaded to a website for the world to see or made available only to select users on the network.

Compliant with IEEE802.3af PoE standard, it can easily to obtain power source when it is locate to a place that is no power outlet.

1.1 Overview

This user's manual explains how to operate the 30M Infrared Internet Camera from a computer. Basically, the user's manual is written to be read on the computer display. However, users might consider printing it out to access easily and read it before you operate the Network Camera.

1.2 Features

- high quality 1/3 inch color CCD sensor of 30M IR distance
- Clear and high-image quality pictures in the daytime and at night
- 3GGP for 3G mobile remote application
- Compliant with IEEE 802.3af (PoE)
- Multi-profile encoder supports MPEG-4 and M-JPEG video compression simultaneously
- IR LED used on ICA-310 are 4 times brighter than ordinary IR LED
- Special mental base enhances lighting and dissipates heat
- Weather-proof protection housing against the various weather
- Plug-N-Watch is able to simplify system integration in an existing network environment
- Supporting TCP/IP networking, SMTP e-mail, and HTTP public network standards, ICA-310 can be applied and utilized to a mixed IP network environment
- Easy configuration: the network administrator can configure and manage ICA-310 via Windows-based utility or web interface
- DDNS, PPPoE, FTP upload supports provide more alternative in your surveillance network
- Motion Detection, the motion detection feature can monitor any suspicious movement in specific area

1.3 Package Contents

User can find the following items in the package:

1. ICA-310 x 1
2. Power adapter x 1
3. Wall mount accessories x 1
4. User's Manual and Utility CD x 1
5. Quick Installation Guide x 1

Note :

1. If any of the above items are missing, please contact your dealer immediately.
2. Using the power supply that is not the one included in ICA-310 packet will cause damage and void the warranty for this product.
3. If ICA-310 is obtaining power from a PoE device, you don't have to connect the power adapter to ICA-310.

2. Basic Setup

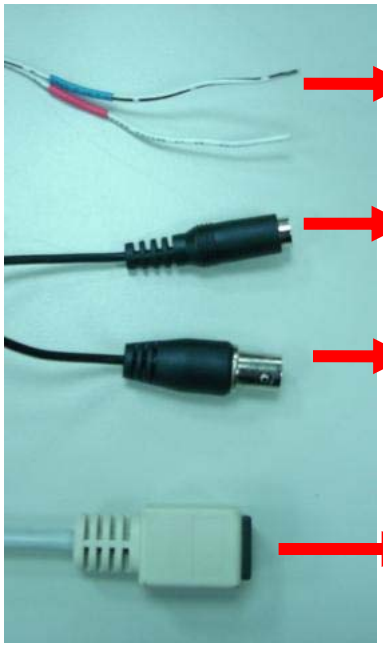
This chapter provides details of installing and configuring the ICA-310

2.1 System Requirements

Network Interface	10/100MBase-TX Ethernet
Monitoring System	Recommended for Internet Explorer 6.0 or later
System Hardware	· CPU: Pentium 4, 1.5GHz or above · Memory Size : 512 MB (512 MB or above Recommended) · VGA card resolution : 1024 x 768 or above **· Network bandwidth: In VGA resolution mode, minimum upload bandwidth is 1Mbps.**
System Requirement	For Viewer & Recorder Application
Support OS	Win 2000 , Win XP
System Hardware	16 cameras surveillance application · CPU: Pentium 4, 2.8GHz or faster · Memory Size : 512 MB or above · VGA card resolution : 1024 x 768 or above · Free space of hard disk: 10GB or higher · Power Supply: 300W or higher

Note: The listed information is minimum system requirements only. Actual requirement will vary depending on the nature of your environment.

2.2 Physical Details



- ***RS485 cables (Blue: D+ / Red: D-) - To connect to P/T scanner.***
- ***Power Connector – Connect to 12V DC power adapter.***
- ***BNC video output – For analog video.***
- ***RJ-45 Connector – Use for connect a CAT5 cable to your hob/switch.***

Cable Connections:

1. RS-485: Connect to a Pan/Tilt external scanner unit.

   This connector is built inside the ICA-310 housing. If you need to install the RS-485, please contact your dealer for more information.

2. Power Connector: The input power is 12VDC.

   Note: Supplies the power to the ICA-310 with the power adapter included in package.

3. Video Output Connector (BNC port)

   The ICA-310 also provides composite video output. User can use BNC video cable to connect the ICA-310 with a TV monitor or DVR.

4. RJ-45 LAN Connector: For connect a LAN cable to your Hub/Switch or PoE device.

   The LAN port is a RJ-45 connector for connections to 10Base-T Ethernet or 100Base-TX Fast Ethernet cabling. This Ethernet port built N-Way protocol can detect or negotiate the transmission speed of the network automatically. Please use Category 5 “straight” cable to connect the ICA-310 to a 100Mbps Fast Ethernet network switch or hub. If you are plan to connect the ICA-310 to a PoE device (such as PoE switch) to get the power source, you will also connect the RJ-45 cable from this connector to the PoE device.

   Note: In case you need to connect the device to PC or notebook directly, you should use a cross-over cable instead.
   Use only one power source, either 12VDC or Power over Ethernet through UTP cable at one time. Use of both powers will damage the camera permanently.

2.3 Hardware Installation

1. Fix ICA-310 to the location with wall mount fixture.
2. Plug-in Ethernet Cable into RJ-45 LAN port. Connect an Ethernet cable to the LAN port on the ICA-310 and connect the other side of the Ethernet cable to a hub/switch or PoE device.
3. Connect RS485 D+ and D- interface (if you need to control P/T external scanner).
4. Connect the bundled power adapter to camera and plug-in this adapter into power outlet. OR , connect your ICA-310 to a PoE device.
5. Connect Video BNC connector to a local TV monitor or DVR if necessary.
6. Done.

2.4 Initial Utility Installation

Insert the bundled CD into the CD-ROM drive to launch the autorun program. Once completed, a welcome menu screen will appear.

Click the “IPWizard Utility” hyperlink in the welcome screen, the below InstallShield Wizard dialog box will appear.

Note: If the welcome screen does not appear, click “Start” at the taskbar. Then, select “Run” and type “D:\Utility\setup.exe”, assume D is your CD-ROM drive.

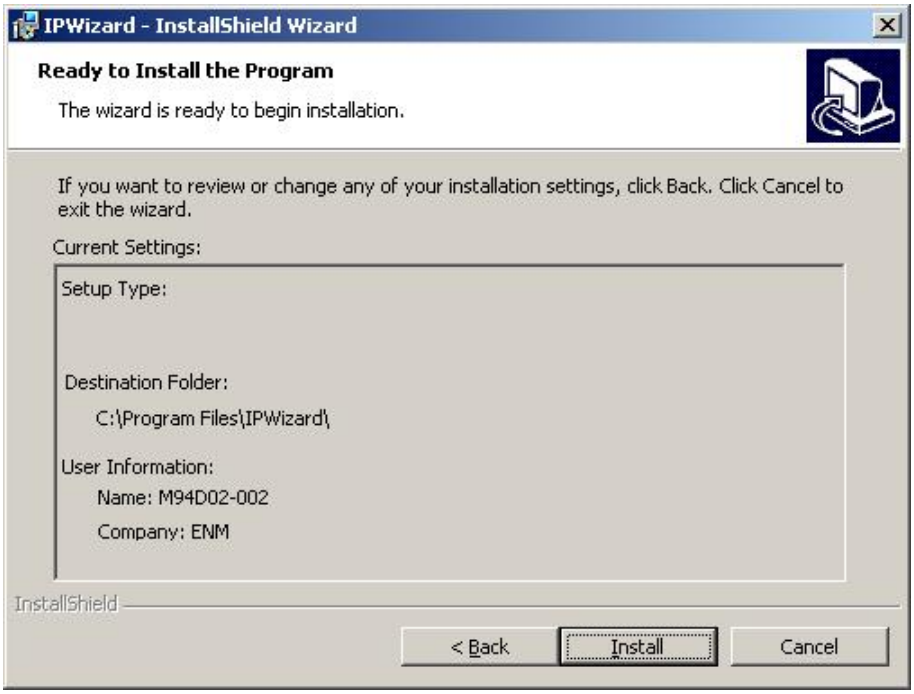
InstallShield Wizard
IPWizard Setup is preparing the InstallShield Wizard which will guide you through the program setup process. Please wait.
Checking Windows(R) Installer Version
Cancel

The “Welcome to the InstallShield Wizard for IPWizard” will display on the screen and click “Next” to continue.

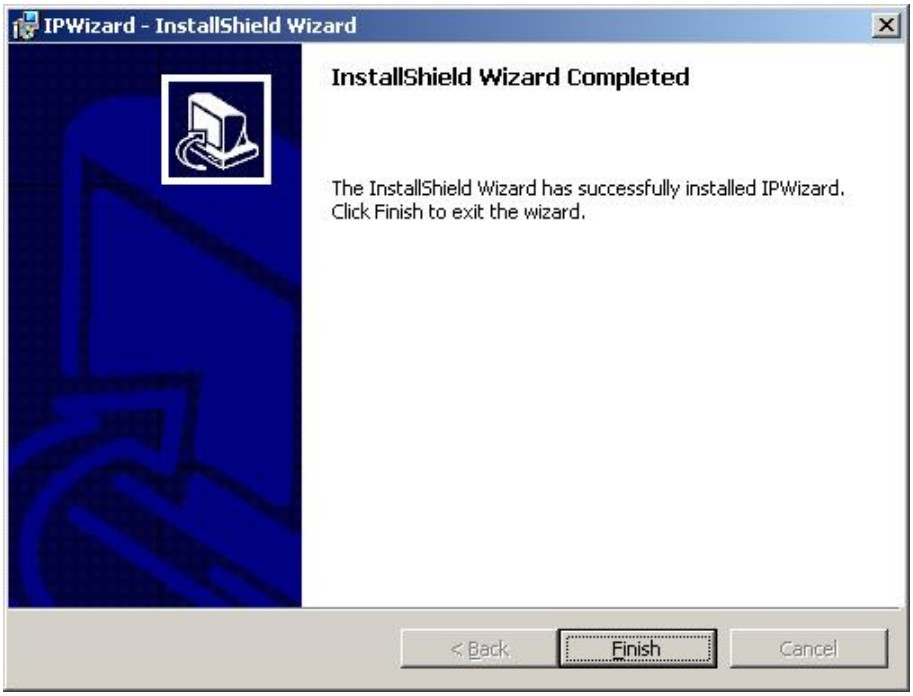
IPWizard - InstallShield Wizard
Welcome to the InstallShield Wizard for IPWizard
The InstallShield(R) Wizard will install IPWizard on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

Please click “Next” to install with original settings, or you may click “Change…” button to modify the install folder then press “Next” to continue.

Please click “Install” to start the installation.



Please click “Finish” to complete the driver installation



Please double-click the utility icon

on the desktop, and then you will see the ICA-310 initial utility - IPWizard. Please refer to the next section to operate this utility to finish the initial configuration of your ICA-310.

2.5 IPWizard

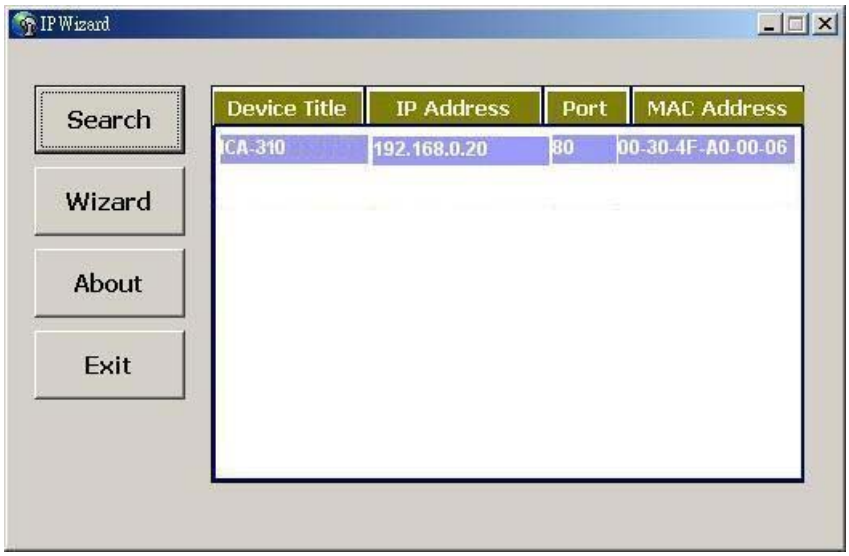
When you installed the ICA-310 on a LAN environment, you may execute IPWizard to discover ICA-310's IP address and set up related parameters in the ICA-310.

Search Button:

When click **Search** button, a searching window will pop up. IPWizard is starting to search ICA-310 on the LAN. The message "No Network Devices Is Found" will appear on this window if IPWizard cannot find any camera on the LAN. Otherwise, existed cameras will be listed. If total quantity is over, please move the cursor to Information Box. Click on the left button of the mouse and the Information Box of the Listing Window will roll upward automatically; on the contrary, move the cursor to the Information Box on the top of Listing Window and click on the left button of the mouse and Listing Window will roll downward.

Wizard Button:

If IPWizard finds your camera, **Wizard** button will become available. Please select the device you would like to configure in the Information Box. The device will turn into yellow which means this device is selected, please press "**Wizard**" button. Or you could double click the mouse left key on the selected camera. Relative settings will be carried out. Details of Install Wizard will be specified as Section 2.6.



About Button:

When click "About" button, you will see the version information of IPWizard shown in the pop-up dialog box.

Exit Button:

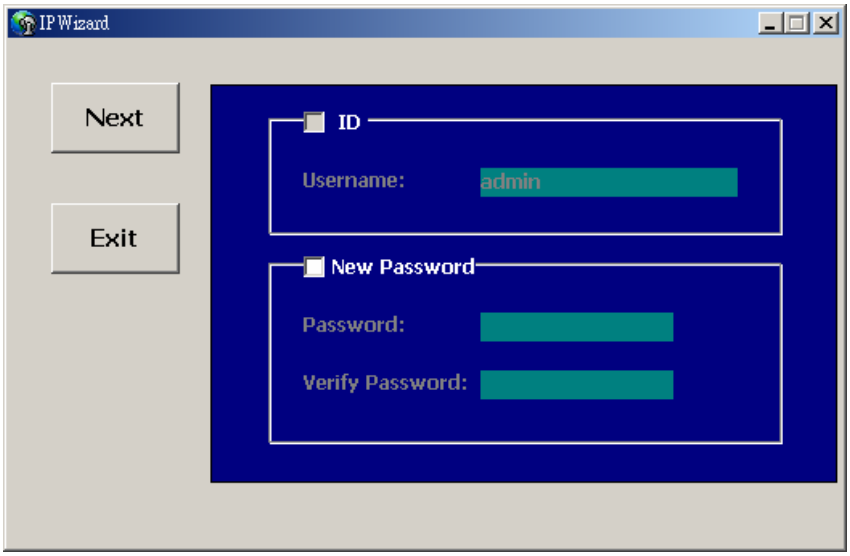
Click "**Exit**" button will close the IPWizard Program.

2.6 Configure With IPWizard

After pressing Installation Wizard, please key in Username and Password of the device when login dialog box appears on the screen. You can login the setup page if authorized name and password is correct. Default **username/password** for machine login: **admin**/<no password>

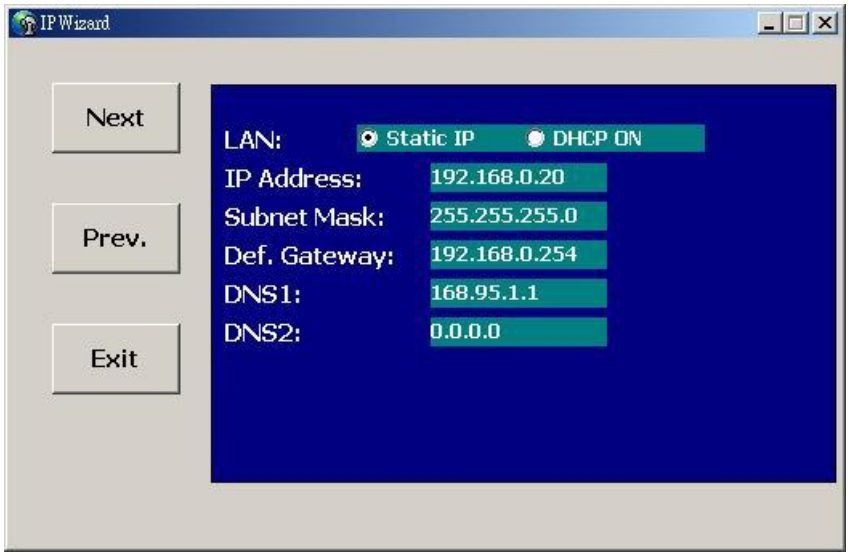
Wizard Page 1: Username and Password

This page is about the change of the authorized user name and password of the selected device. If you don't want to change them, please click "Next" to move to the next page. Press "Exit" button if you don't want to set up right now. If you want to change authorized name or password, you have to check the box in front of **ID** or **New Password**. Authorized Username should contain at least 5~20 characters and New Password should contain at least 4~8 characters.



Wizard Page 2: LAN Setting

This page is about the select of Static IP or DHCP ON.



LAN: You can configure this ICA-310 to obtain its address automatically or manually assign. If there is a DHCP server in your network environment and you select "**DHCP ON**", ICA-310 can automatically obtain an IP address. If you don't have DHCP server or you want to use fixed IP address, please select "**Static IP**" and fill in the following fields with proper parameters.

IP Address: IP address is a unique number for identifies this device on the WAN or LAN. These numbers are usually shown in groups separated by periods, for example: 192.168.0.200

Subnet Mask: Subnets allow network traffic between hosts to be separated based on the network's configuration. In IP networking, traffic takes the form of packets. IP subnets advance network security and performance to some level by organizing hosts into logical groups. Subnet masks contain four bytes and usually appear in the same "dotted decimal" data. For example, a very common subnet mask in its binary demonstration 11111111 11111111 11111111 00000000 will usually be shown in the corresponding, more readable form as 255.255.255.0.

Def. Gateway: A gateway is a piece of software or hardware that passes information between networks. You'll see this term most often when you either log in to an Internet site or when you're transient email between different servers.

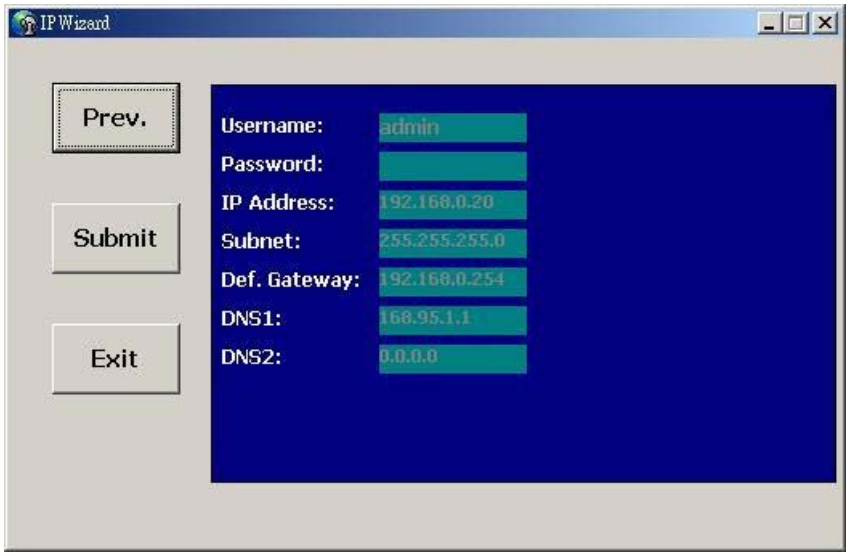
DNS1: When you send email or position a browser to an Internet domain such as xxxxx.com, the domain name system translates the names into IP addresses. The term refers to two things: the conventions for naming hosts and the way the names are control across the Internet.

DNS2: The same function as DNS1. It is optional, not necessary

Note: If no IP address is assigned after 30 seconds, the ICA-310 will work with it's default IP address **192.168.0.20**. User may now open your web browser, and key in http://192.168.0.20 in the address bar of your web browser to logon ICA-310's web configuration page.

Wizard Page 3: Confirmation

This page shows the new configurations. If it is correct, please press "Submit" icon and the setting information will be save to your ICA-310. Click on "Exit" to close this window.

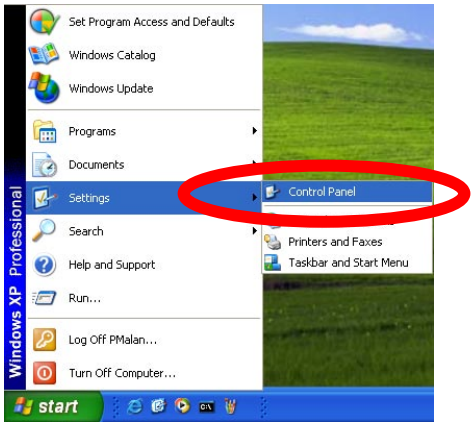


2.7 Using UPnP of Windows® XP™

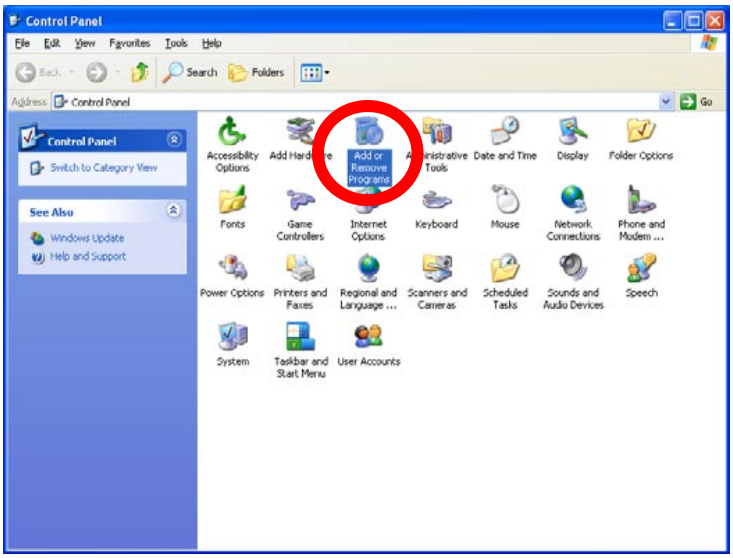
UPnP™ is short for Universal Plug and Play, which is a networking architecture that provides compatibility among networking equipment, software, and peripherals. This device is an UPnP enabled device. If the operating system, Windows XP, of your PC is UPnP enabled, the device will be very easy to configure. Use the following steps to enable UPnP settings only if your operating system of PC is running Windows XP.

Note: Windows 2000 does not support UPnP feature.

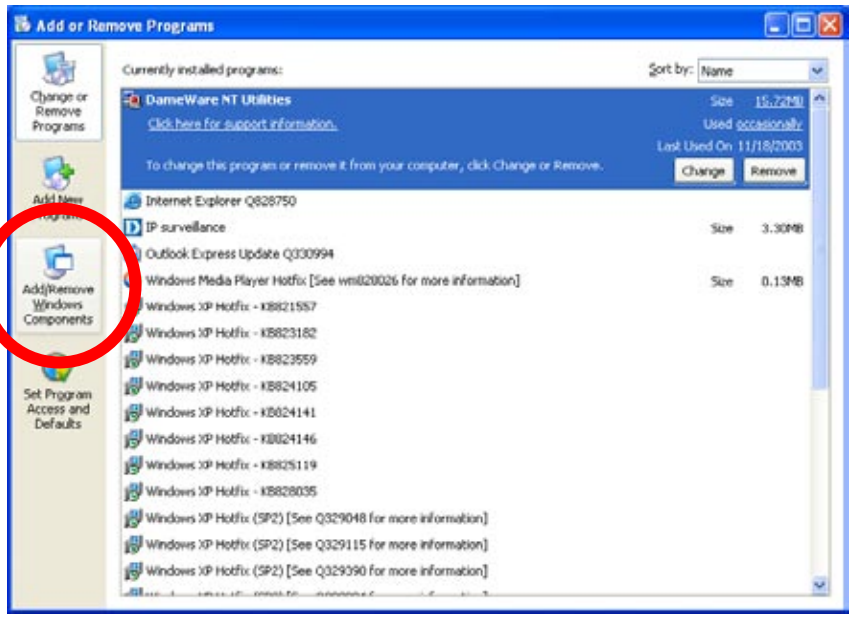
Go to **Start > Settings**, and Click **Control Panel**



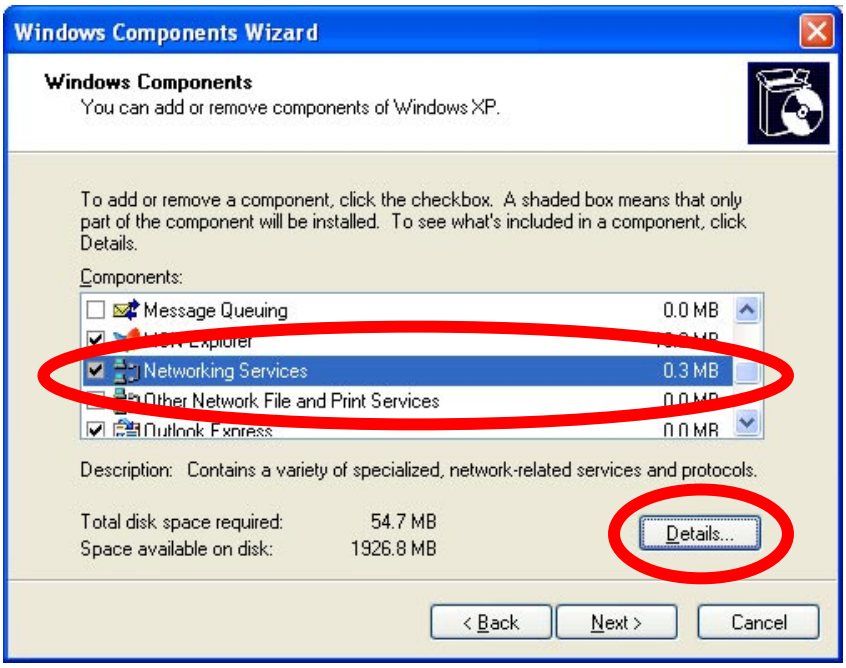
The “Control Panel” will display on the screen and double click **Add or Remove Programs** to continue



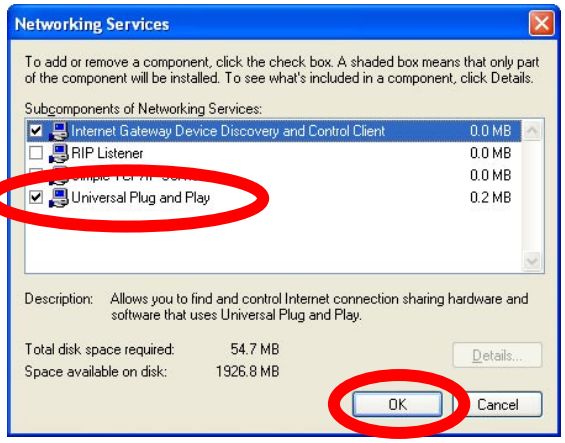
The “Add or Remove Programs” will display on the screen and click **Add/Remove Widows Components** to continue.


Add or Remove Programs
Change or Remove Programs
Add/Remove Windows Components
Set Program Access and Defaults
Currently installed programs:
Sort by: Name
DameWare NT Utilities
Click here for support information.
Size 15.72MB
Used occasionally
Last Used On 11/18/2003
To change this program or remove it from your computer, click Change or Remove.
Change
Remove
Internet Explorer Q828750
IP surveillance
Size 3.30MB
Outlook Express Update Q330994
Windows Media Player Hotfix [See wm820026 for more information]
Size 0.13MB
Windows XP Hotfix - KB821557
Windows XP Hotfix - KB823182
Windows XP Hotfix - KB823559
Windows XP Hotfix - KB824105
Windows XP Hotfix - KB824141
Windows XP Hotfix - KB824146
Windows XP Hotfix - KB825119
Windows XP Hotfix - KB828035
Windows XP Hotfix (SP2) [See Q329048 for more information]
Windows XP Hotfix (SP2) [See Q329115 for more information]
Windows XP Hotfix (SP2) [See Q329390 for more information]

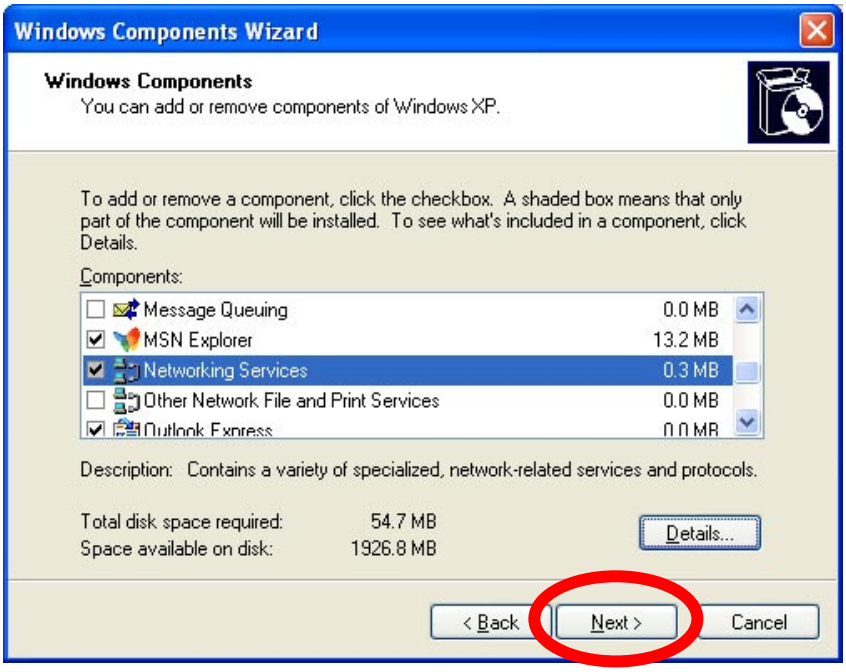
The following screen will appear, select **Networking Services** and click **Details** to continue.


Windows Components Wizard
Windows Components
You can add or remove components of Windows XP.
To add or remove a component, click the checkbox. A shaded box means that only part of the component will be installed. To see what's included in a component, click Details.
Components:
Message Queuing 0.0 MB
Networking Services 0.3 MB
Other Network File and Print Services
Outlook Express
Description: Contains a variety of specialized, network-related services and protocols.
Total disk space required: 54.7 MB
Space available on disk: 1926.8 MB
Details...
< Back
Next >
Cancel

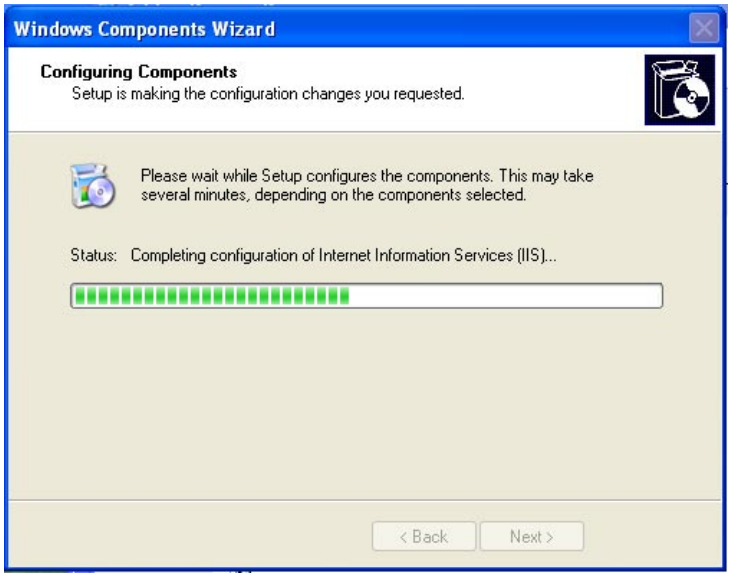
The “Networking Services” will display on the screen, select **Universal Plug and Play** and click **OK** to continue.


Networking Services
To add or remove a component, click the check box. A shaded box means that only part of the component will be installed. To see what's included in a component, click Details.
Subcomponents of Networking Services:
Internet Gateway Device Discovery and Control Client 0.0 MB
RIP Listener 0.0 MB
0.0 MB
Universal Plug and Play 0.2 MB
Description: Allows you to find and control Internet connection sharing hardware and software that uses Universal Plug and Play.
Total disk space required: 54.7 MB
Space available on disk: 1926.8 MB
Details...
OK
Cancel

Please click **Next** to continue


Windows Components Wizard
Windows Components
You can add or remove components of Windows XP.
To add or remove a component, click the checkbox. A shaded box means that only part of the component will be installed. To see what's included in a component, click Details.
Components:
Message Queuing 0.0 MB
MSN Explorer 13.2 MB
Networking Services 0.3 MB
Other Network File and Print Services 0.0 MB
Outlook Express 0.0 MB
Description: Contains a variety of specialized, network-related services and protocols.
Total disk space required: 54.7 MB
Space available on disk: 1926.8 MB
Details...
< Back
Next >
Cancel

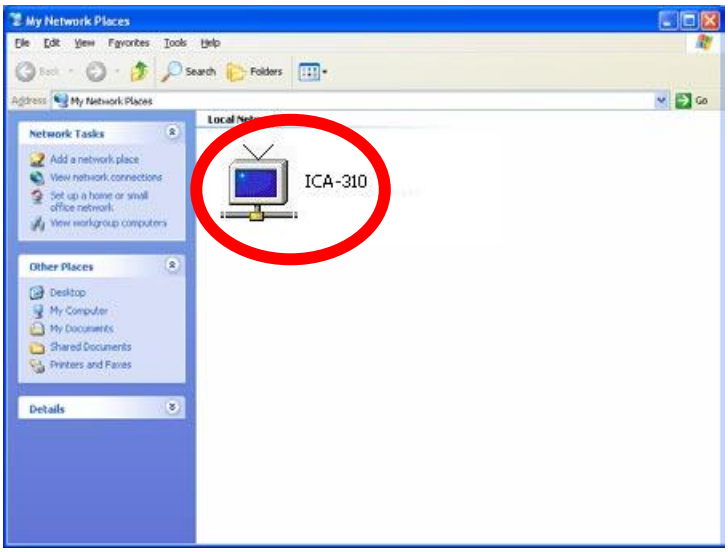
The program will start installing the UPnP automatically. You will see the below pop-up screen, please wait while Setup configures the components.


Windows Components Wizard
Configuring Components
Setup is making the configuration changes you requested.
Please wait while Setup configures the components. This may take several minutes, depending on the components selected.
Status: Completing configuration of Internet Information Services (IIS)...
< Back
Next >

Please click **Finish** to complete the UPnP installation

Windows Components Wizard
Completing the Windows Components Wizard
You have successfully completed the Windows Components Wizard.
To close this wizard, click Finish.
< Back
Finish

Double-click **My Network Places** on the desktop, the “My Network Places” will display on the screen and double-click the UPnP icon with ICA-310 to view your device in an internet browser.



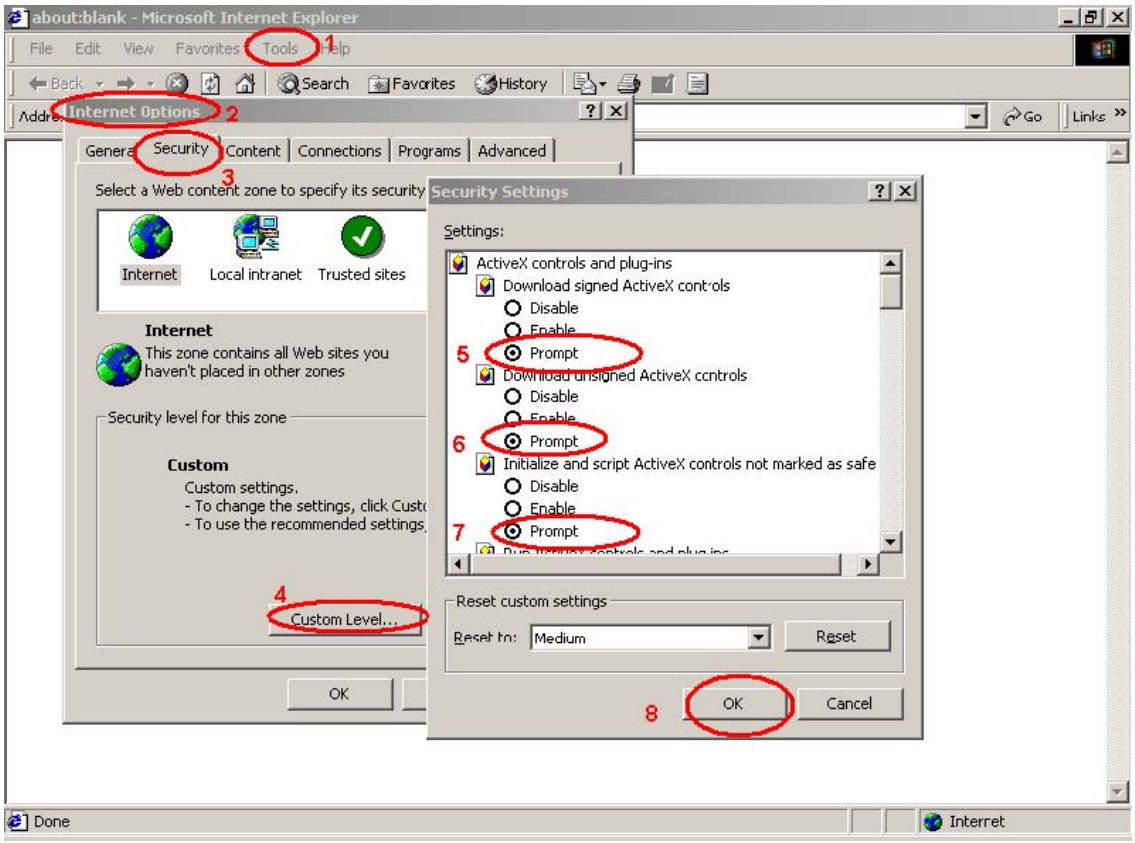
2.8 Setup ActiveX to use the ICA-310

The ICA-310 web page communicates with the ICA-310 using an ActiveX control. The ActiveX control must be downloaded from the ICA-310 and installed on your PC. Your Internet Explorer security settings must allow for the web page to work correctly. To use the ICA-310, user must setup his IE browser as follows:

From your IE browse ➔ ”Tools” ➔ ”Internet Options…” ➔ ”Security” ➔”Custom Level…”, please setup your “Settings” as follow.

Set the first 3 items

- *Download the signed ActiveX controls*
- *Download the unsigned ActiveX controls*
- *Initialize and script the ActiveX controls not masked as safe to Prompt*



By now, you have finished your entire PC configuration for ICA-310.

3. Web-based Management

This chapter provides setup details of the ICA-310's Web-based Interface.

3.1 Introduction

The ICA-310 can be configured with your Web Browser. Before configure, please make sure your PC is under the same IP segment with ICA-310.

3.2 Connecting to ICA-310

- Use the following procedure to establish a connection from your PC to the ICA-310.
- Once connected, you can add the ICA-310 to your Browser's Favorites or Bookmarks.

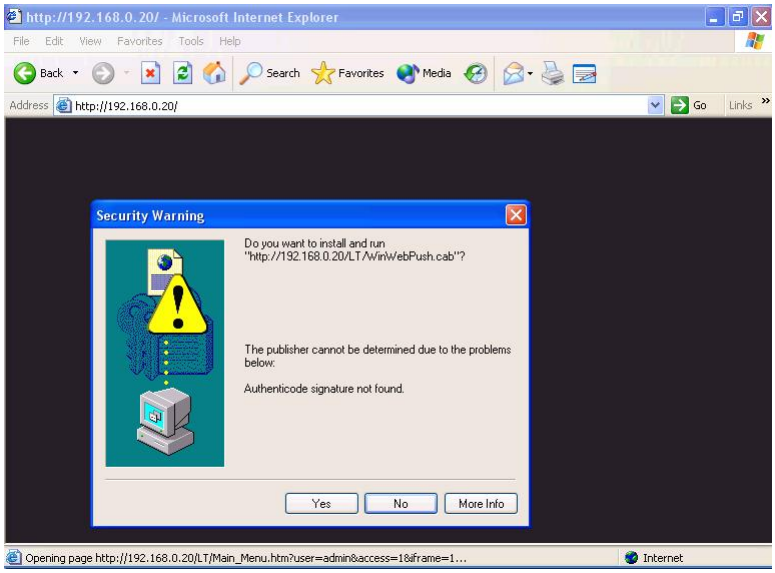
Start the web browser on the computer and type the IP address of the ICA-310. The Default IP: " http://192.168.0.20 "

The login window of ICA-310 will appear, Default login **username/password** is :

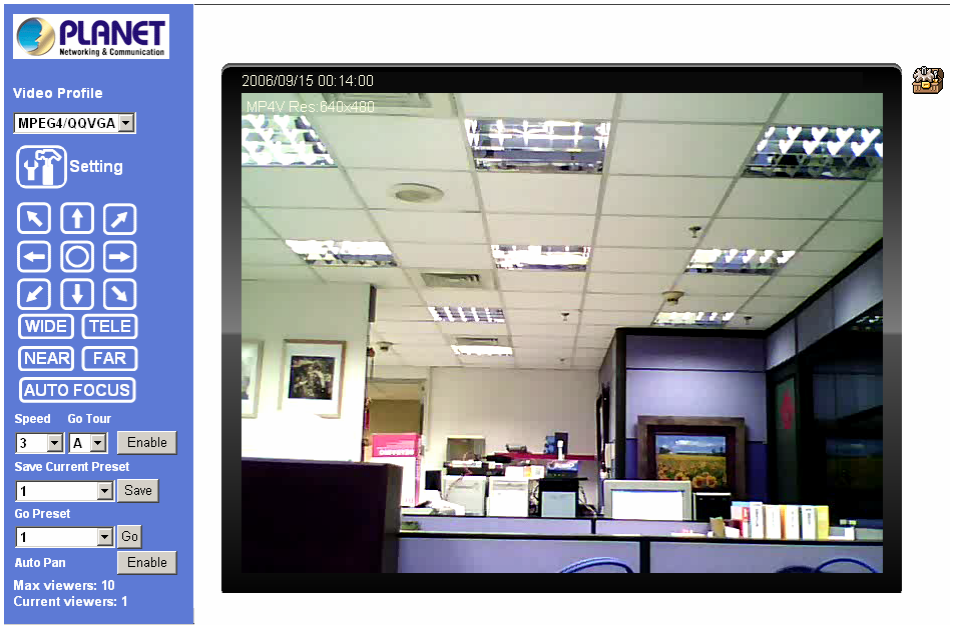
admin/ <no password>

Note: If the User name and Password have been changed with IPWizard, please enter the new User name and Password here.

Web browser may display the “Security Warming” window, select “Yes” to install and run the ActiveX control into your PC.



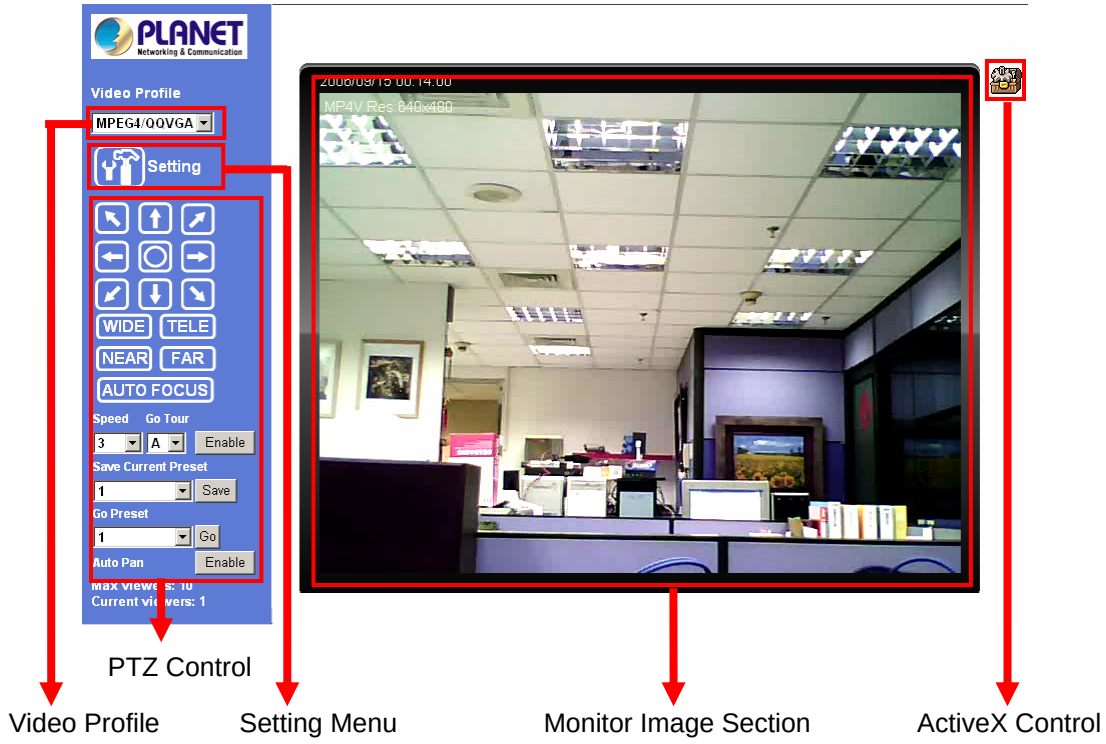
After the ActiveX control was installed and run, the first image will be displayed.



Note: If you log in the ICA-310 as an ordinary user, setting function will be not available. If you log in the ICA-310 as the administrator, you can perform all the settings provided within the device.

3.3 Live View

Start-up screen will be as follow no matter an ordinary users or an administrator.



Monitor Image Section: The image shot by the ICA-310 is shown here. The date and time are displayed at the top of the window.

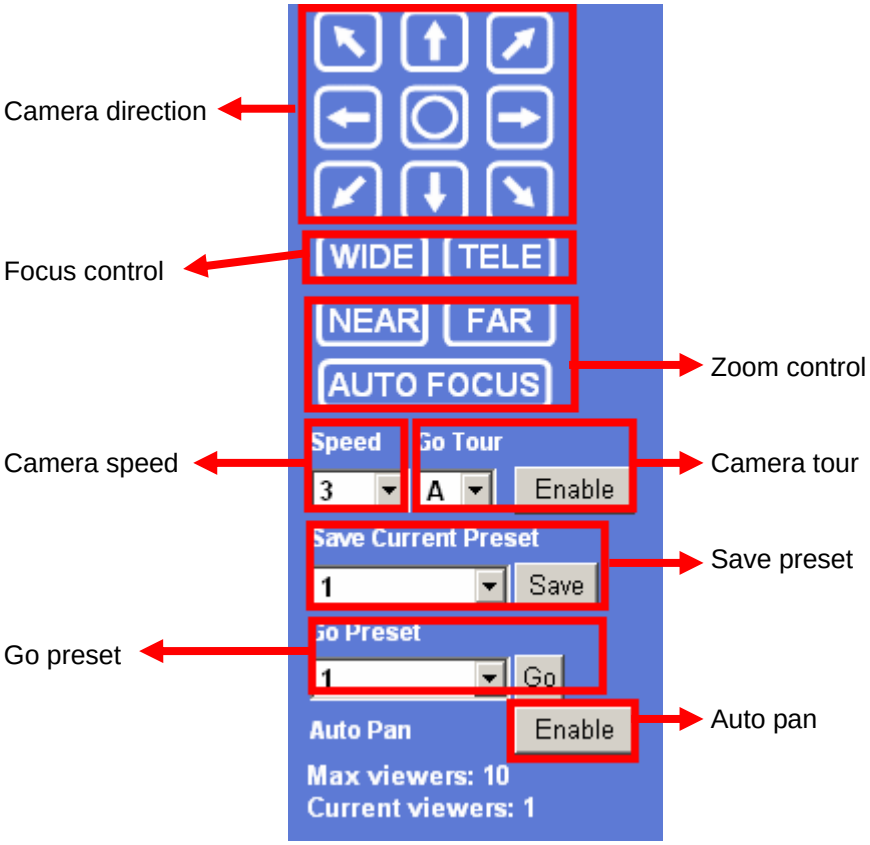
Video Profile: The ICA-310 support multi-profile for both MEPG-4 and M-JPEG simultaneously. User can chose the proper and/or preferred profile here.

ActiveX Control: The plug-in ActiveX control supports a lot of functions by clicking the left mouse button. Note that this feature only supports on the ActiveX control within Microsoft® Internet Explorer.

Setting Menu: This function is detail setting for ICA-310 that only available for user logged into ICA-310 as administrator.

PTZ Control: Click to display the following control panel:

NOTE: If you want use this function, must installation ICA-310 on the external scanner at first time and connect RS-485 on the external scanner.



- **Camera direction:** Control camera up/down/left/right and home position
- **Zoom control:** Press **WIDE** to zoom out, and press **TELE** to zoom in.
- **Focus control:** To focus on a nearby object, press **NEAR**. To focus on a distant object, press **FAR**. By pressing ONE PUSH AF, the focus is set to the optimum position automatically.
- **Camera speed:** Choose the speed of Pan and Tilt.
- **Camera tour:** Turn on or off the selected camera tour. Camera tour is comprised by series of preset locations.
- **Save/Go preset:** Set the preset position or go to one of these positions. Maximum preset position is 32.
- **Auto Pan:** Turn on or off the auto pan of camera. While auto pan is on, the camera will swing the camera cyclically.

3.4 ActiveX Control

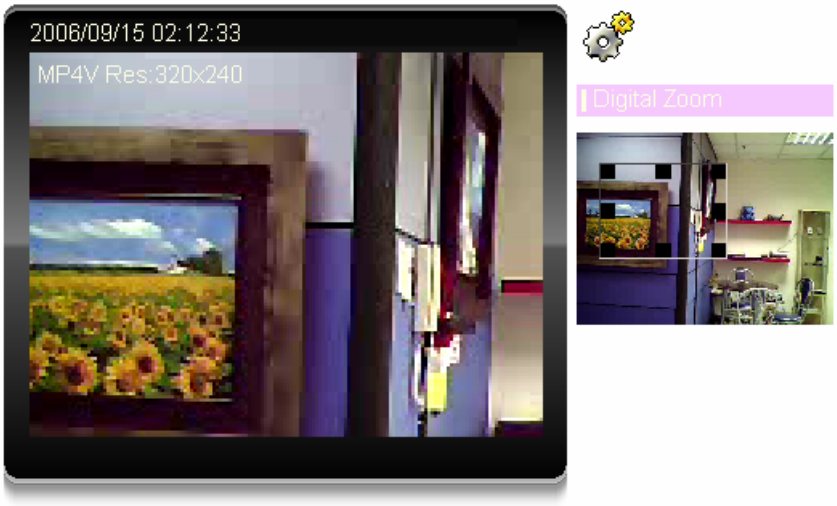
On the ActiveX control icon, click the LeftMouseButton, then a menu pop-up. This menu

provides features that are unique to the ActiveX control. These features include:

- *"Digital Zoom",*
- *"Record",*
- *"Snapshot",*
- *"Statistics",*
- *"About"*

3.4.1 Digital Zoom

Click **Digital Zoom** to active this function as above. User can drag or scale the box over the video to adjust zoom ratio and position.



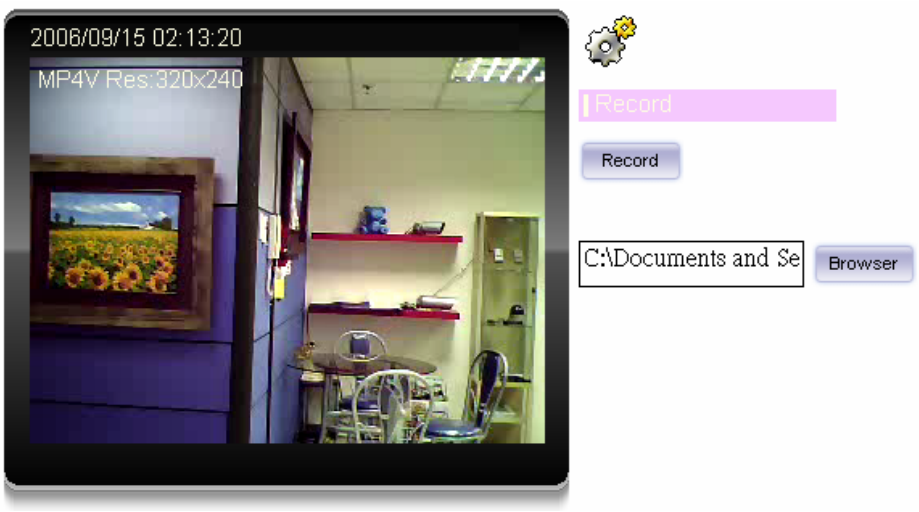
3.4.2 Record

Click **Record** to activate this function. Press **Record** button to start recording. The video file is saved as ASF format into your local PC. While you want to stop it, press **Stop** to stop recording. Select **Browser**, the pop-up window to select the save path and file name prefix, select **OK** to continue.

After stop recording, list the files, this file is named as Video_yyyymmddhhmmss.asf

The ASF files can be display by the standard Windows Media Player, but it needs the DixectX 9.0 or later version to be installed.

Note: Default save path is “C:\Documents and Settings\All user\Desktop

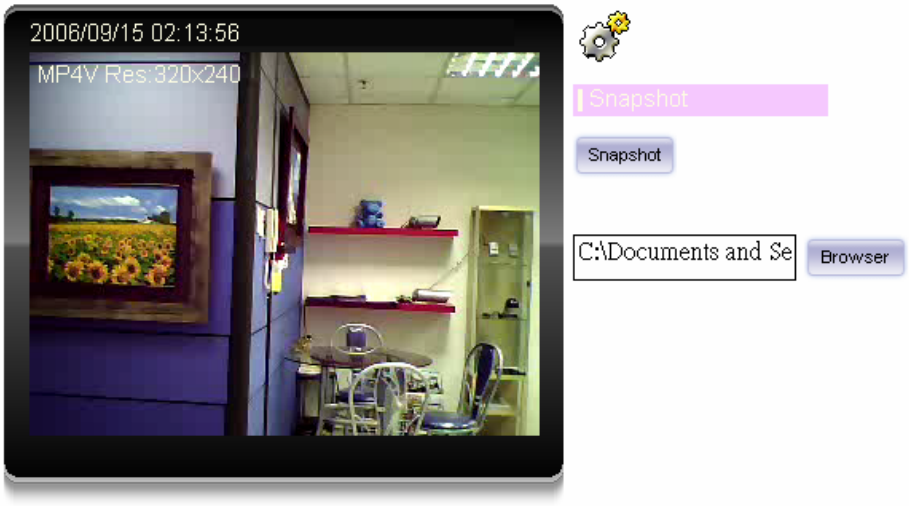


3.4.3 Snapshot

Click **Snapshot** to activate this function. Press **Snapshot** button to take a picture. The image file is saved as JPEG format into your local PC. Select **Browser**, the pop-up window to select the save path and file name prefix, select **OK** to continue.

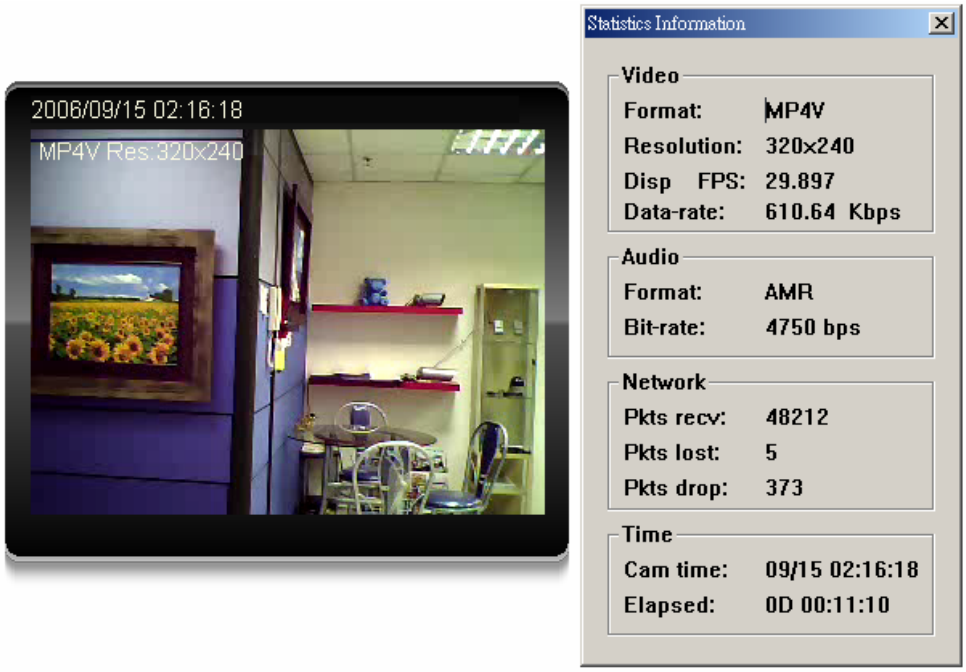
If you like to retrieve the saved image, select the file to display the saved image by using any one of graph editing tools.

Note: Default save path is “C:\Documents and Settings\All user\Desktop



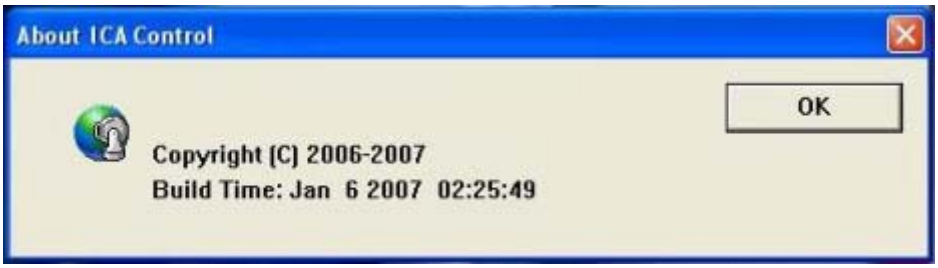
3.4.4 Statistics

Click **Statistics** to activate this function. A window will be popup to show the statistics information of the streaming status. **Note** that this information is the statistics between the device and your local PC.



3.4.5 About

Click **About** to show the ActiveX information



3.5 System Setting

This function is only available for user logged into ICA-310 as administrator.

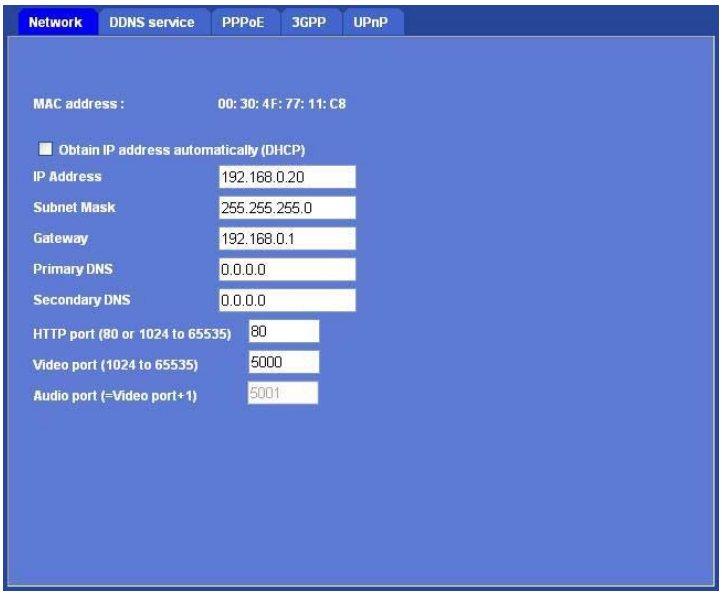
Click in each menu name to display its setting page.

Item	**Action**
Network	Configure Network settings such as DHCP, DDNS, 3GPP, PPPoE and UPnP
Camera	Adjust camera parameters
System	Configure system information, date & time, maintenance, and view system log file.
Video	Configure bit rate and frame rate of video profiles
User	Setup user name, password and login privilege
E-Mail	Setup E-Mail configuration
FTP	This device is a client site and configure information to upload images to server
Object detection	Setup Object detection

3.5.1 Network

Use this menu to configure the network to connect the device and the clients.

This section provides the menu of connecting the device through Ethernet cable.



MAC address: Display the Ethernet MAC address of the device. Note that user cannot change it.

Obtain an IP address automatically (DHCP): DHCP: Stands for Dynamic Host Configuration Protocol. Enable this checked box when a DHCP server is installed on the network to issue IP address assignment. With this setting, the IP address is assigned automatically. If this device cannot get an IP address within limited tries, the device will assign a default IP address, 192.168.0.20, by itself as the default IP address.

IP address, Subnet mask, Gateway, 1st DNS, 2nd DNS server: If you do not select Obtain an IP address automatically, then you need to enter these network parameters by yourself.

IP Address: This address is a unique numbers that identifies a computer or device on the WAN or LAN. These numbers are usually shown in groups separated by periods, for example: 192.168.0.200

Subnet Mask: Subnets allow network traffic between hosts to be separated based on the network's configuration. In IP networking, traffic takes the form of packets. IP subnets advance network security and performance to some level by organizing hosts into logical groups. Subnet masks contain four bytes and usually appear in the same "dotted decimal" data. For example, a very common subnet mask in its binary demonstration 11111111 11111111 11111111 00000000 will usually be shown in the corresponding, more readable form as 255.255.255.0.

Gateway: A gateway is a piece of software or hardware that passes information between networks. You'll see this term most often when you either log in to an Internet site or when you're transient email between different servers.

Primary DNS: When you send email or position a browser to an Internet domain such as xxxxx.com, the domain name system translates the names into IP addresses. The term refers to two things: the conventions for naming hosts and the way the names are control across the Internet.

Secondary DNS: The same function as DNS1. It is option not necessary

Note: need to reboot the device to take this setting effect.

HTTP Port: The device supports two HTTP ports. The first one is default port 80 and this port is fixed. This port is very useful for Intranet usage. The second HTTP port is changeable. Users could assign the second port number of http protocol, and the WAN users should follow the port number to login. If the http port is not assigned as 80, users have to add the port number in back of IP address. For example: http://192.168.0.20:80.

If multiple devices are installed on the LAN and also required to be accessed from the WAN, then the **HTTP Port** can be assigned as the virtual server port mapping to support multiple devices.

Video Port: Specify the transmission port number of video stream. The default value is 5000. User can specify a number between 1024 and 65535.

Audio Port: The Audio port value is equal to Video port plus one and it cannot be modified by user manually. (The function is useless in this model)

When the configuration is finish, please click “OK” to save and enable the setting.

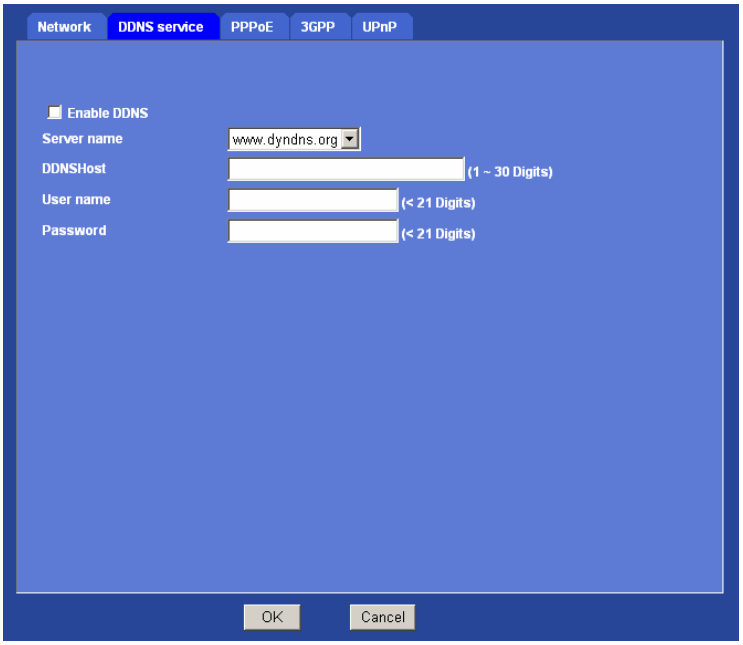
3.5.2 DDNS server

DDNS: Stands for Dynamic Domain Name Server

The device supports DDNS. If your device is connected to xDSL directly, you might need this feature. However, if your device is behind a NAT router, you will not need to enable this feature. Because DDNS allows the device to use an easier way to remember naming format rather than an IP address. The name of the domain is like the name of a person, and the IP address is like his phone number. On the Internet we have IP numbers for each host (computer, server, router, and so on), and we replace these IP numbers to easy remember names, which are organized into the domain name. As to xDSL environment, most of the users will use dynamic IP addresses. If users want to set up a web or a FTP server, then the Dynamic Domain Name Server is necessary. For more DDNS configuration, please consult your dealer.

Your Internet Service Provider (ISP) provides you at least one IP address which you use to connect to the Internet. The address you get may be static, meaning it never changes, or dynamic, meaning it’s likely to change periodically. Just how often it changes, depends on your ISP. A dynamic IP address complicates remote access since you may not know what your current WAN IP address is when you want to access your network over the Internet. The solution to the dynamic IP address problem comes in the form of a dynamic DNS service.

The Internet uses DNS servers to lookup domain names and translates them into IP addresses. Domain names are just easy to remember aliases for IP addresses. A dynamic DNS service is unique because it provides a means of updating your IP address so that your listing will remain current when your IP address changes. There are several excellent DDNS services available on the Internet and best of all they’re free to use. One such service you can use is www.DynDNS.org. You’ll need to register with the service and set up the domain name of your choice to begin using it. Please refer to the home page of the service for detailed instructions or refer to Appendix E for more information.



Enable DDNS: To enable or disable the DDNS service here.

Server name: Choose the built-in DDNS server.

DDNS Host: The domain name is applied of this device.

User name: The user name is used to log into DDNS.

Password: The password is used to log into DDNS.

3.5.3 PPPoE

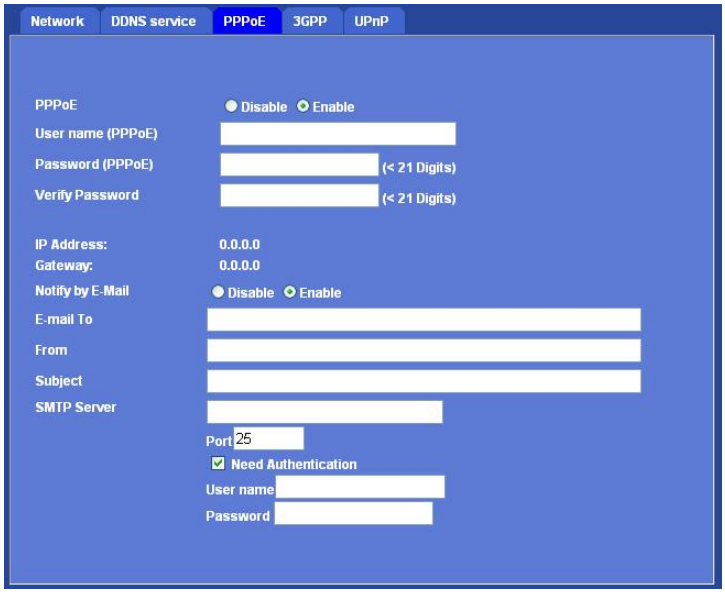
PPPoE: Stands for Point to Point Protocol over Ethernet

A standard builds on Ethernet and Point-to-Point network protocol. It allows ICA-310 connect to Internet with xDSL or cable connection, it can dial up your ISP and get a dynamic IP address. For more PPPoE and Internet configuration, please consult your ISP.

It can directly connect to the xDSL, however, it should be setup on a LAN environment to program the PPPoE information first, and then connect to the xDSL modem. Power on again, then the device will dial on to the ISP connect to the WAN through the xDSL modem.

The procedures are

- Connect to a LAN by DHCP or Fixed IP
- Access the device, enter **Setting ➔ Network ➔ PPPoE** as below



Enable PPPoE: To enable or disable the PPPoE service here.

User name (PPPoE): Type the user name for the PPPoE service which is provided by ISP.

Password (PPPoE): Type the password for the PPPoE service which is provided by ISP.

IP Address / Gateway: It will display IP address and gateway that ICA-310 gets a dynamic IP from ISP, when ICA-310 each dials up success.

Notify by E-Mail: If enable this function, then the “SMTP Server” and “E-mail To” field need to be filled.

E-mail To: Type the receiver’s e-mail address. This address is used for replay mail.

From: Type the sender’s E-mail address.

Subject: Type the server name of SMTP server.

Port: Set port number of SMTP service.

Need Authentication: If the mail server needs authentication, then choose the option “On”. Also the password information needs to be inputted.

User name: Type the user name for the SMTP server.

Password: Type the password for the SMTP server.

3.5.4 3GPP

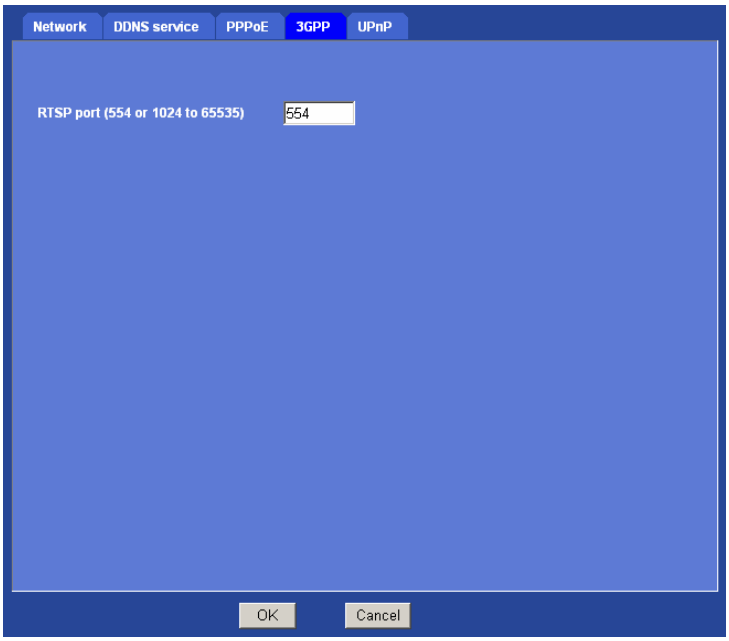
The device is 3GPP compatible by default. To view live video over 3GPP:

- Contact your cell phone provider and make sure that 3GPP service is available and the configuration is correct for your cell phone.
- Check that the device has a completely public IP address, i.e. no ports blocked by a firewall. It is highly recommended that you have a fixed and public IP address.

• In **Setting ➔ Video ➔ MP4/QQVGA ➔ Bit rate**, set the maximum bit rate to 128 k bit/s.

RTSP port: Choose the RTSP port. The default value is 554.

RTSP: Sands for Real Time Streaming Protocol



Mobile Phone Dialing procedure:

Step 1: Contact your cell phone provider and make sure that **3GPP service is available**.

Step 2: **Enable "internet access" function on your mobile phone**. Some telecom will automatically download the setup profile to your mobile phone; some telecom need you call the service center to enable the internet access function

Step 3: Choose a verified **video player (ex. PacketVideo)**

Step 4: Open the video player. Base on your requirement, type either URL address:

rtsp://*host*:554/av*N* for both audio and video tracks.

rtsp://*host*:554/video*N* for video track only.

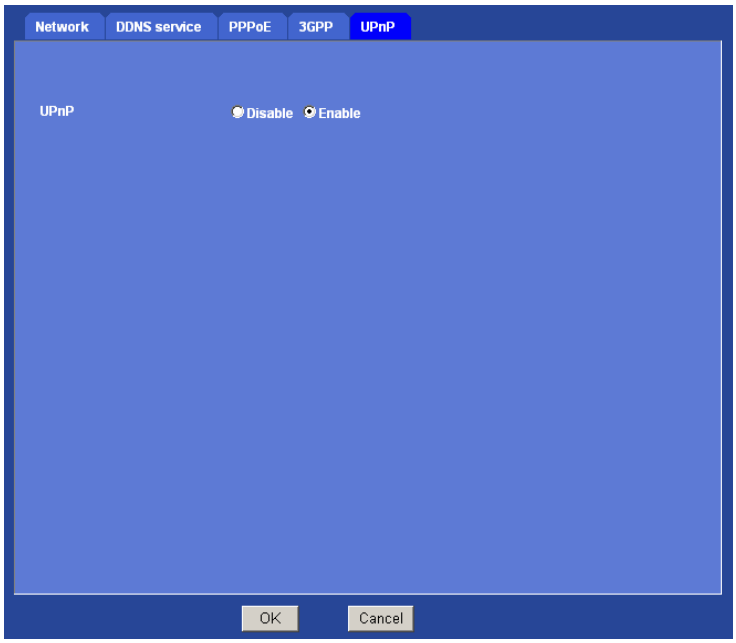
rtsp://*host*:554/audio for audio track only.

Note: Where host is the host name or IP address of the ICA-310, and N is the number of the profile (1-=MPEG4 VGA, 2=MPEG4 QVGA, 3=MPEG4 QQVGA) for the video stream. 3 is recommended.

3.5.5 UPnP

UPnP (Universal Plug and Play) which is a networking architecture that provides compatibility among networking equipment, software, and peripherals. This device is an UPnP enabled ICA-310. If your operating system is UPnP enabled, the device will automatically be detected and a new icon will be added to "My Network Places." If you do not want to use the UPnP functionality, it can be disabled.

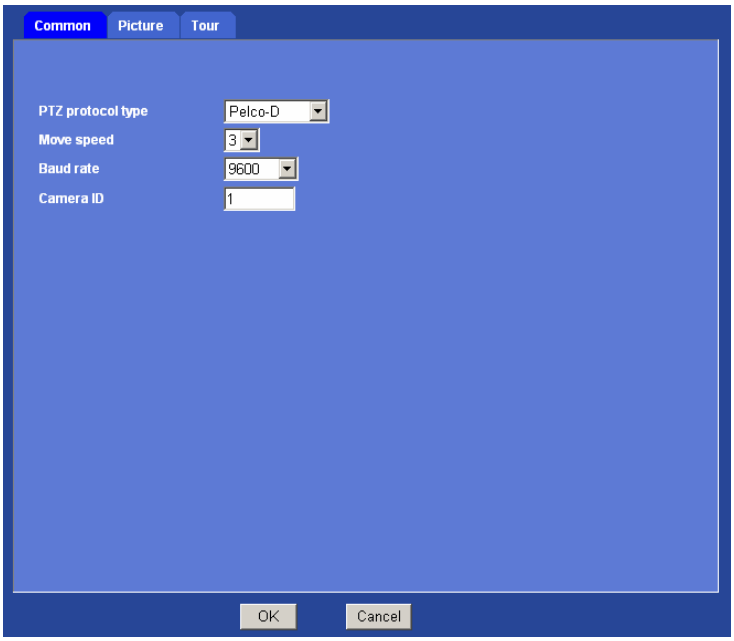
Enable UPnP discovery: To enable or disable the UPnP discovery service here.



3.6 Camera

Use this menu to set the function of the camera of ICA-310

3.6.1 Common



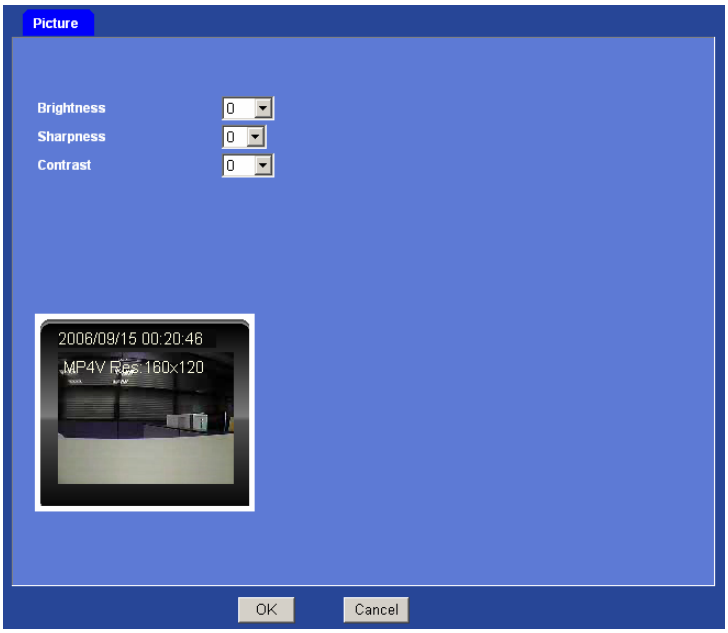
PTZ protocol type: The Network Camera is connected to built-in ICA-310 and controls this device thru RS485 bus. It has three protocols that include Pelco-D, Pelco-P and K-ZM23S1N. Pelco-D is default protocol.

Move speed: Moving speed of P/T control. User need to set value properly.

Baud rate: This is the communication speed between network module and ICA-310. **Note** that please DO NOT changes the default value except on special purpose. If so, user needs to check and set value properly for both sides.

Camera ID: This is the camera ID set in speed dome camera. **Note** that please DO NOT changes the default value except on special purpose. If so, user needs to check and set value properly for both sides.

3.6.2 Picture



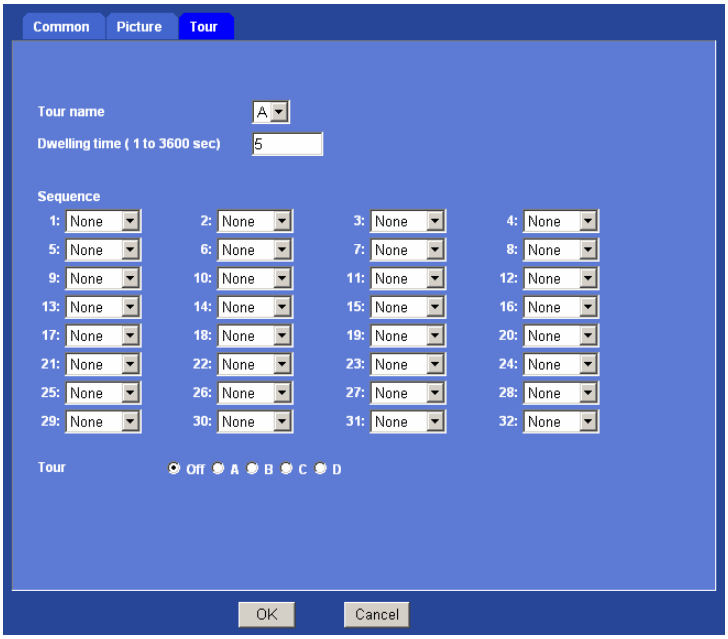
You can adjust the camera view quality in this menu.

Brightness: Large value will brighten camera.

Sharpness: Large value will sharpen camera.

Contrast: Large value will contrast camera heavily.

3.6.3 Tour



Tour Name: The group name of the sequence of camera tour. There are 4 tours: tour A to D.

Dwelling Time: Type a period of time during which the camera is to stay at each preset point, between 1 to 3600 seconds.

Sequence: Set the sequence of the tour. Maximum 32 points can be assigned. The selected preset position is added in the **Sequence** list from 1 to 32. The tour will ignore and skip any “None” position in the sequence.

Tour: Choose which sequence group, tour, should be activated or disable it.

To use the camera tour function, user must preset some camera positions first. The maximum number of preset points is 32.

In the Camera Tour page, choose the one tour name from A to D. Fill the dwelling time and tour sequence by preset points, and then save these setting. You can repeat above procedure to set more camera tours.

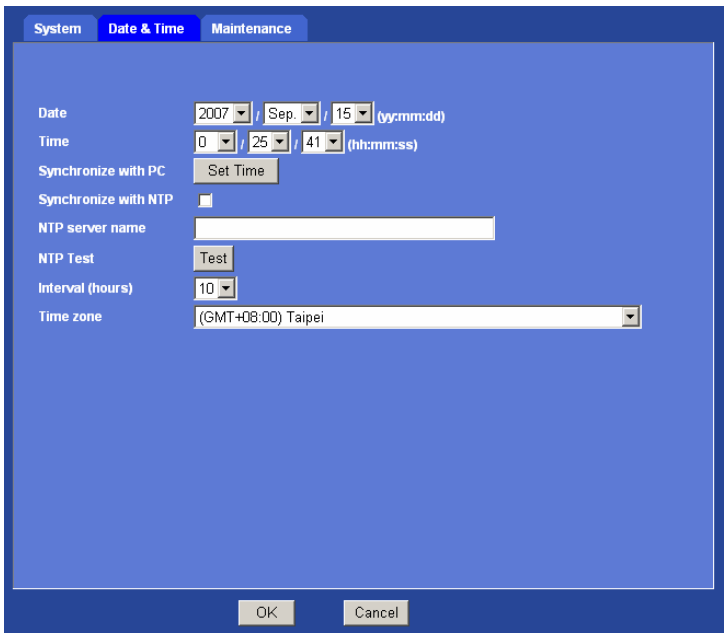
Now, you could choose one of the camera tours and click “OK” button to enable it.

3.7 System

Use this menu to perform the principal settings of ICA-310.

3.7.1 Date & Time

You can setup the time setting of ICA-310, make it synchronized with PC or remote NTP server. Also, you may select the correct time zone of your country.



Date: Displays the date of the device.

Time: Displays the date of the device.

Synchronize with PC: Press “Set Time” button to do the time synchronization with PC time.

Synchronize with NTP: Select if you want to synchronize the date and time with NTP server (Network Time Protocol). Please set the **NTP server name** and the **Interval**.

NTP server name: Type the host name or IP address of the NTP server.

Interval: Select an interval between 1 and 24 hours at which you want to adjust the device’s time referring to NTP server.

Time zone: Set the time difference from Greenwich Mean Time in the area where the device is installed.

3.7.2 Maintenance

Factory Default: Reset this device to factory default settings. Note that click this button will reset all device parameters to the factory settings.

Firmware upgrade: The device supports new firmware upgrade.

Unzip this firmware file to binary file and store it into your PC. Then follow the steps as bellows carefully:

1. Close all other application programs which are not necessary for firmware update.
2. Make sure that only you access this device at this moment
3. Disable Motion Detection function.
4. Select “**Firmware name**”
5. Select the Firmware binary file. (**Note** that it must make sure that the Firmware only applies to this device, once update, it will be burned into FLASH ROM of system.)
6. Once the firmware file was selected, select “Upgrade”.
7. The upgrade progress information will be displayed on the screen.

8. A message will be shown while the firmware upgraded. Once the upgrading process completed, the device will reboot the system automatically.

9. Please wait for 80 seconds, and then you can use IPWizard to search the device again.

Warning!!! The download firmware procedure cannot be interrupted. If the power and/or network connection are broken during the download procedure, it might possibly cause serious damage to the device.

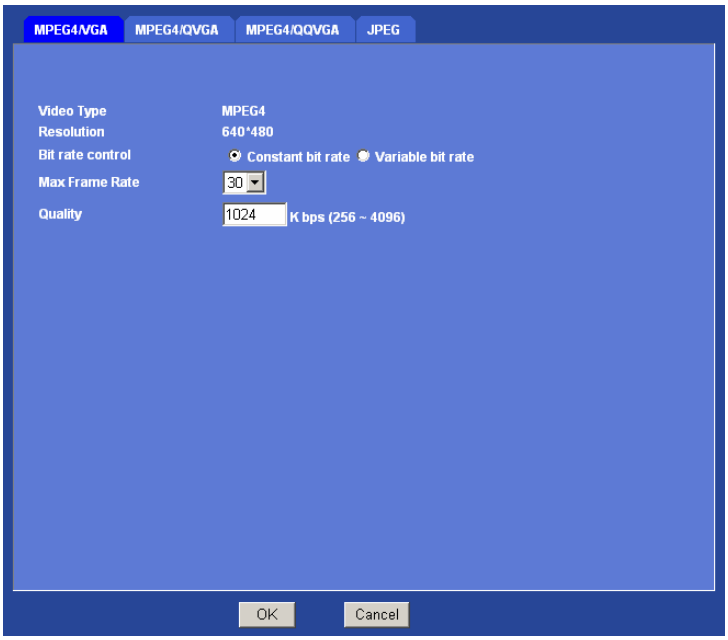
Please be aware that you should not turn off the power during updating the firmware and wait for finish message.

Furthermore, do not try to upgrade new firmware if it's not necessary.

3.8 Video

This device provides 4 video profiles as below to support different request to each client simultaneously. Each user can choose his preferred video profile as his request independently.

3.8.1 MPEG4/VGA



Video Type: It's MPEG4 mode in this profile.

Resolution: It's VGA mode (640x480) in this profile.

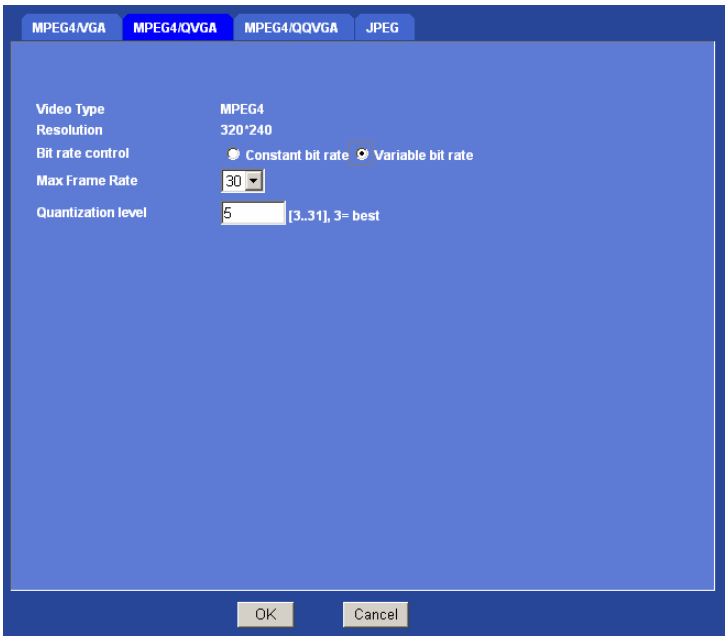
Bit rate control: Defines the rate control method of this profile. There are two options: Constant Bit Rate (CBR) or Variable Bit Rate (VBR). For CBR, the idea bit rate is between 256kbps and 4096kbps. User can set the desired bit rate to match the limitation of bandwidth. For VBR, user should choose the quantization level to set the video quality rather than bit rate.

Max Frame Rate: Defines the targeted frame rate of this profile. For example, set the frame

rate to 15 fps, then the image will be updated for 15 frames per second. User can set the desired max frame rate versus video quality under the limited bandwidth.

Quality or Quantization level: For CBR mode, user should define the bit rate of this profile. For VBR mode, user should define the quantization level of this profile.

3.8.2 MPEG4/QVGA



Video Type: It's MPEG4 mode in this profile.

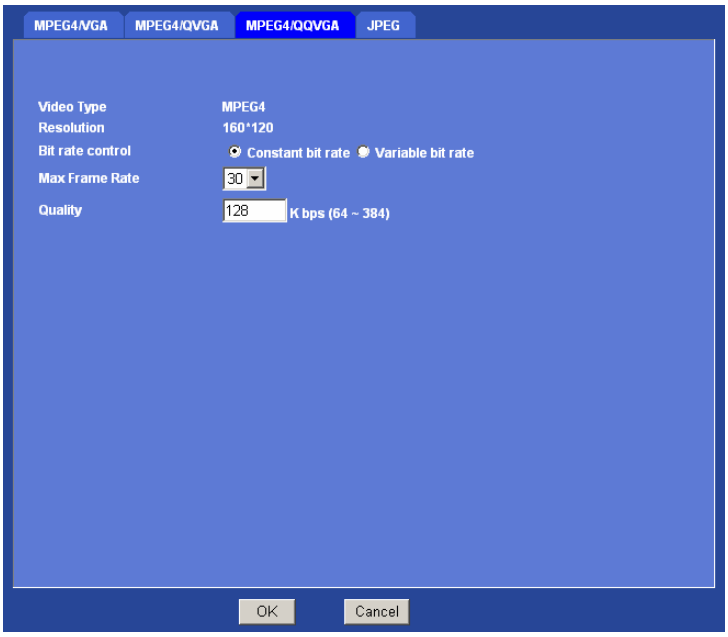
Resolution: It's QVGA mode (320x240) in this profile.

Bit rate control: Defines the rate control method of this profile. There are two options: Constant Bit Rate (CBR) or Variable Bit Rate (VBR). For CBR, the idea bit rate is between 256kbps and 4096kbps. User can set the desired bit rate to match the limitation of bandwidth. For VBR, user should choose the quantization level to set the video quality rather than bit rate.

Max Frame Rate: Defines the targeted frame rate of this profile. For example, set the frame rate to 15 fps, then the image will be updated for 15 frames per second. User can set the desired max frame rate versus video quality under the limited bandwidth.

Quality or Quantization level: For CBR mode, user should define the bit rate of this profile. For VBR mode, user should define the quantization level of this profile.

3.8.3 MPEG4/QQVGA



Video Type: It's MPEG4 mode in this profile.

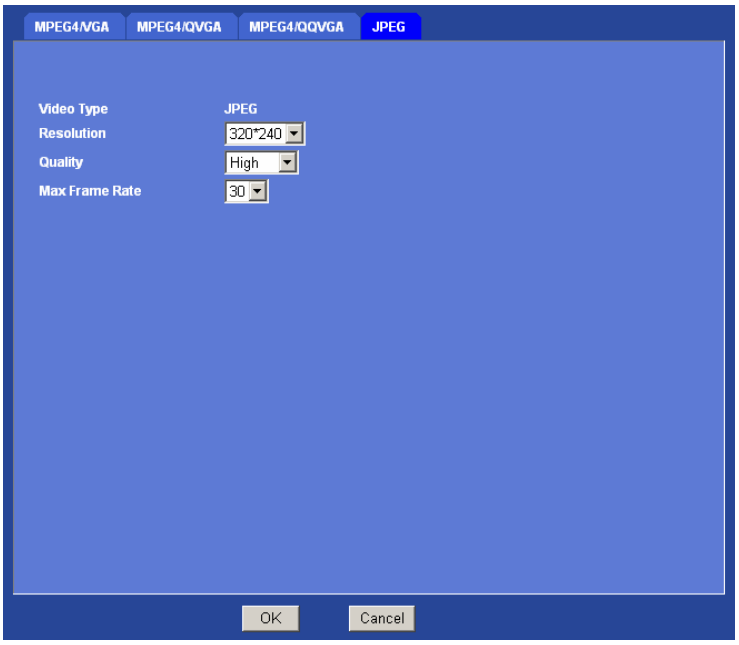
Resolution: It's QQVGA mode (160x120) in this profile.

Bit rate control: Defines the rate control method of this profile. There are two options: Constant Bit Rate (CBR) or Variable Bit Rate (VBR). For CBR, the idea bit rate is between 64kbps and 384kbps. User can set the desired bit rate to match the limitation of bandwidth. For VBR, user should choose the quantization level to set the video quality rather than bit rate.

Max Frame Rate: Defines the targeted frame rate of this profile. For example, set the frame rate to 15 fps, then the image will be updated for 15 frames per second. User can set the desired max frame rate versus video quality under the limited bandwidth.

Quality or Quantization level: For CBR mode, user should define the bit rate of this profile. For VBR mode, user should define the quantization level of this profile.

3.8.4 JPEG/QVGA



Video Type: It's JPEG mode in this profile.

Resolution: User can select VGA, QVGA, or QQVGA mode as the resolution of this JPEG profile.

Quality: This profile provides 5 quality levels: Best, Better, Normal, Low, and Lowest in which

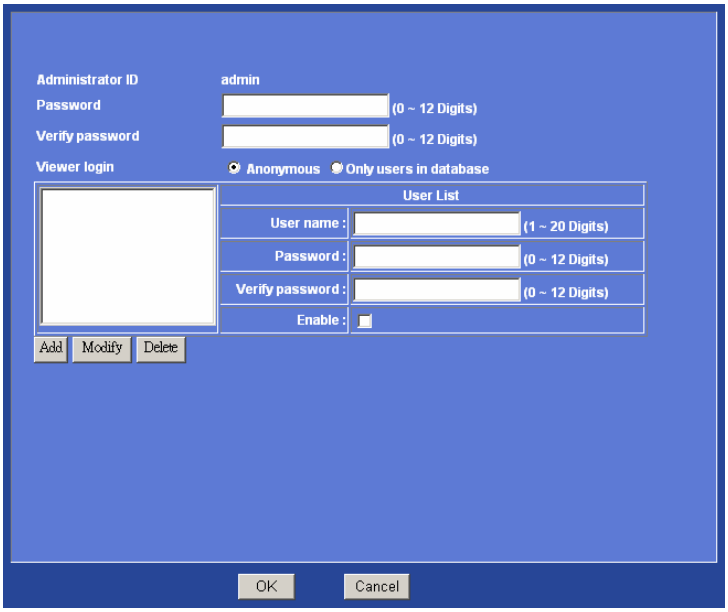
Best: Video is the best but need more bandwidth to transmit image

Lowest: Video is much worse but the bandwidth requirement is also lower.

Frame rate: Defines the targeted frame rate of this profile. For example, set the frame rate to 15 fps, then the image will be updated for 15 frames per second. User can set the desired max frame rate versus video quality under the limited bandwidth.

3.9 User

Use this menu to set the user names and password of the Administrator and up to 10 users, and access right of each user.



Administrator level has authority to setup and modify all settings of ICA-310, thus please keep this account for higher security.

Administrator ID: The username of “Administrator” is fixed as “admin”

Password: Enter the administrator’s new password here.

Verify Password: Please enter the administrator’s new password here again to confirm.

Anonymous: Choose this to enable anonymous user login.

Only users in database: Choose this to disable anonymous user login.

General user level only has authority of video previewing, thus it cannot modify any setting of ICA-310.

User name: Enter the user’s new account here which you want.

Password: Enter the user’s new password here.

Verify Password: Please enter the user’s new password here again to confirm.

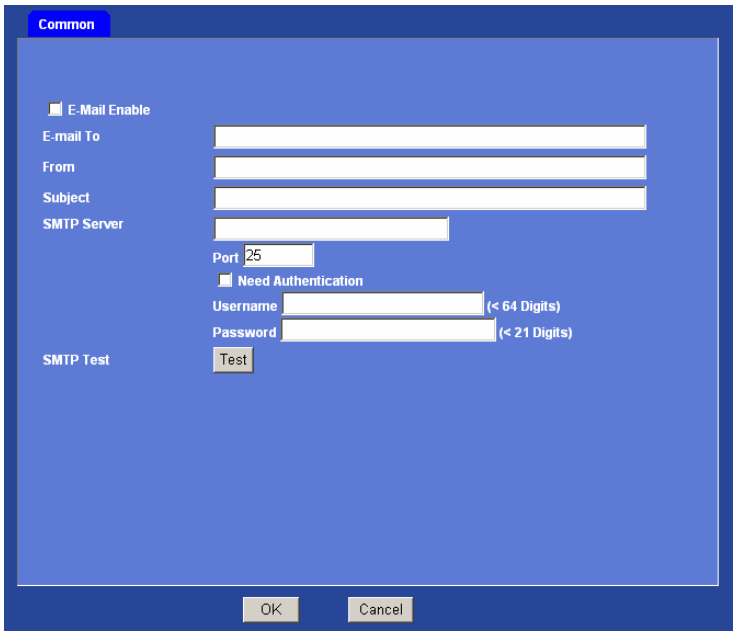
Enable: Select if you want to enable user account.

3.10 E-Mail

Using E-Mail function, user can send an e-mail with attached image file that has been shot triggered with an external sensor or the built-in object detection function. The image file also can be sent periodically.

Common

You may setup SMTP mail parameters for future event-message receiving such as object detected or sensor activated.



E-Mail Enable: To enable or disable E-Mail function.

E-mail to: Type the receiver's e-mail address. **Note**: you can specify multiple recipient email addresses at the time.

From: Type the sender's E-mail address. This address is used for reply e-mails.

Subject: Type the subject/title of the e-mail.

SMTP Server: Type the SMTP server name or the IP address of the SMTP server.

Port: Set port number of SMTP service.

Need Authentication: Select the authentication required when you send an e-mail.

On: if authentication is required when an e-mail is sent.

Off: if no authentication is required when an e-mail is sent.

User name: Type the user name for the SMTP server if **Authentication** is **On**.

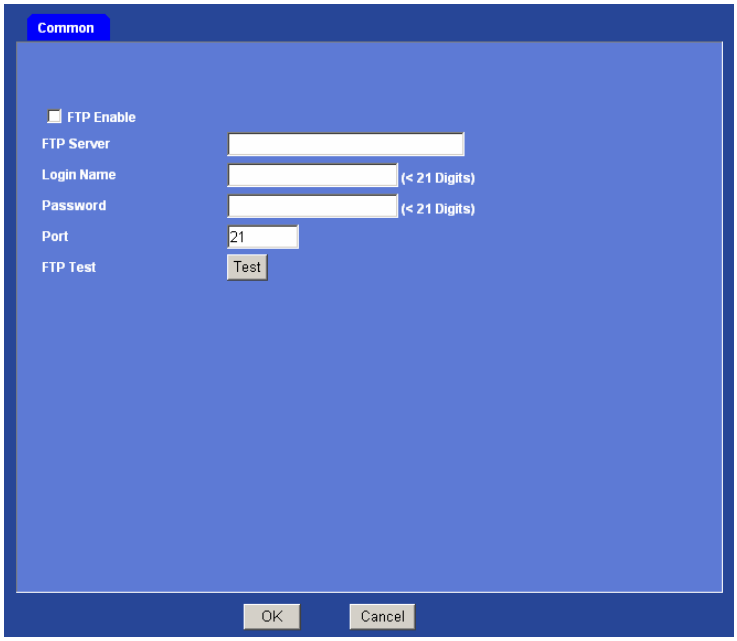
Password: Type the password for the SMTP server if **Authentication** is **On**.

SMTP Test: Send a test mail to mail server to check this account is available or not.

3.11 FTP

Use this menu to set up for capturing and sending still images to an FTP server. Using FTP client function, user can send an image that has been shot linked with the built-in object detection or external sensor input to an FTP server. The image file also can be sent periodically.

Common



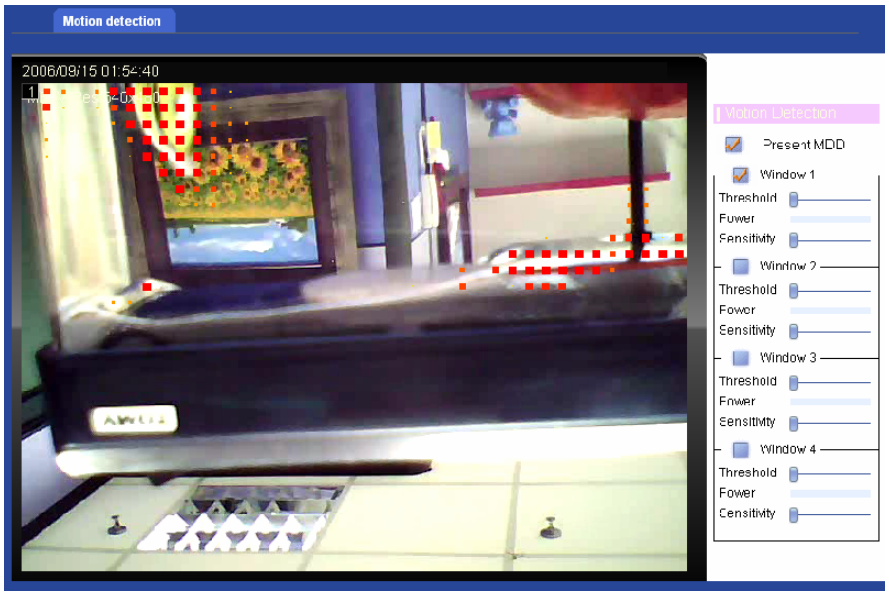
FTP Enable: To enable or disable the FTP function.
FTP Server: Type the server name or the IP address of the FTP server.
Login name: Type the user name for the FTP server.
Password: Type the password for the FTP server.
Port: Set port number of FTP service.
FTP Test: Check the FTP server whether this account is available or not.

3.12 Object detection

Using this menu, user can set the conditions to activate the built-in “Motion detection” and “Object tracking” functions.

Motion detection

Use this menu to specify motion detection window 1 to window 4 and set the conditions for detection while observing a captured image.



Present MDD: To enable or disable the MDD (motion detection data) function. The motion object/area will be marked by red block while this function is enabled.

Window 1 to 4: User can specify up to 4 areas to monitor the image captured by this device. By dragging mouse on the image, you can change the position and size of the window accordingly.

Threshold setting slide bar: Define the threshold level of moving object detection that is common for all the windows. The threshold level is used to judge whether or not there has been any motion in the window. Move this bar to the right will increase the threshold. An alarm is triggered when motion that exceeds the threshold level is detected in the window.

Move the slide bar to right will increase the threshold.

Power: Show the detected power of the motion detection within the specified window.

Sensitivity: Define the sensitivity value of motion detection. Move this bar to the right will increase the sensitivity.

Move the slide bar to right will increase the sensitivity.

Appendix A: Hardware Restore

There is a button hidden under the ICA-310 housing. User must open the housing cover first and then access this button. This button is use for hardware restore to factory default settings. Sometimes restarting the ICA-310 will make the system back to a normal state. If the system still got problems after reset, user can restore the factory default settings and install it again.

Restore the ICA-310:

1. Press and hold the button down continuously.
2. Wait at least 3 seconds and release the button. Then the ICA-310 has been restored to factory default settings and reboot again.

Note: Restoring the factory default setting will lose the all previous settings included IP address forever. User will need to run the IPWizard program to search the device and configure it to let the device work properly again.

Appendix B: Troubleshooting & FAQ

Question	Answer or Resolution
Features	
The video and audio codec is adopted in the ICA-310.	The ICA-310 utilizes MPEG-4 and M-JPEG dual compression to providing high quality images. Where MPEG-4 is a standard for video compression and M-JPEG is a standard for image compression. The audio codec is selectable by either AMR or G.726 compression.
The maximum number of users access ICA-310 simultaneously.	The maximum number of users is 10. However, it also depends on the total bandwidth accessed to this device from clients. The data throughput of the device is around 20~30Mbps. Therefore, the actual number of connected clients is varying by settings of resolution, codec type, frame rate and bandwidth. Obviously, the performance of the each connected client will slow down when many users are logged on.
The ICA-310 can be used outdoors or not.	Yes, this ICA-310 is weatherproof. However, it might need to be equipped with a weatherproof case for better performance.
Install ICA-310	
The network cabling is required for the ICA-310.	The ICA-310 uses Category 5 UTP cable allowing 10 and/or 100 Base-T networking.
The ICA-310 will be installed and work if a firewall exists on the network.	If a firewall exists on the network, port 80 is open for ordinary data communication. This HTTP port and Video/Audio streaming ports needs to be opened on the firewall.
The username and password for the first time or after factory default reset	Username = **admin** and leave password blank. Note that it's all case sensitivity.
Forgot the username and password	Follow the steps below. **1.** Restore the factory default setting by press pressing and holding down more than 3 seconds on ICA-310. **2.** Reconfigure the ICA-310.
Forgot the IP address of the ICA-310.	Check IP address of ICA-310 by using the IPWizard.exe program.
IPWizard program cannot find ICA-310.	• Re power the ICA-310 if cannot find the unit within 1 minutes. • Do not connect ICA-310 over a router. IPWizard program cannot detect ICA-310 over a router.

	• If IP address is not assigned to the PC which running IPWizard program, then IPWizard program cannot find ICA-310. Make sure that IP address is assigned to the PC properly. • Antivirus software on the PC might interfere with the setup program. Disable the firewall of the antivirus software during setting up ICA-310. • Check the firewall setting of your PC or Notebook.
Internet Explorer does not seem to work well with the ICA-310	Make sure that your Internet Explorer is version 6.0 or later. If you are experiencing problems, try upgrading to the latest version of Microsoft's Internet Explorer from the Microsoft webpage.
IPWizard program fails to save the network parameters.	• Network may have trouble. Confirm the parameters and connections of the ICA-310.
Access ICA-310	
Cannot access the login page and other web pages of ICA-310 from Internet Explorer	• Maybe the IP Address of the ICA-310 is already being used by another device or computer. To confirm this possible problem, disconnect the ICA-310 from the network first, and then run the PING utility to check it out. • May be due to the network cable. Try correcting your network cable and configuration. Test the network interface by connecting a local computer to the ICA-310 via a crossover cable. • Make sure the Internet connection and setting is ok. • Make sure enter the IP address of Internet Explorer is correct. If ICA-310 has a dynamic address, it may have changed since you last checked it. • Network congestion may prevent the web page appearing quickly. Wait for a while. The IP address and Subnet Mask of the PC and ICA-310 must be in the same class of the private IP address on the LAN. • Make sure the http port used by the ICA-310, default=80, is forward to the ICA-310's private IP address. • The port number assigned in your ICA-310 might not be available via Internet. Check your ISP for available port. • The proxy server may prevent you from connecting directly to ICA-310, set up not to use the proxy server. • Confirm that Default Gateway address is correct. • The router needs Port Forwarding feature. Refer to your router's

	manual for details. • Packet Filtering of the router may prohibit access from an external network. Refer to your router's manual for details. • Access ICA-310 from the Internet with the global IP address of the router and port number of ICA-310. • Some routers reject the global IP address to access ICA-310 on the same LAN. Access with the private IP address and correct port number of ICA-310. • When you use DDNS, you need to set Default Gateway and DNS server address. • If it's not working after above procedure, reset ICA-310 to default setting and installed it again. • If the problem is not solved, the ICA-310 might be faulty. Contact your dealer for further help.
Image or video does not appear in the main page.	• The first time the PC connects to ICA-310, a pop-up **Security Warning window** will appear to download ActiveX Controls. When using Windows 2000 or Windows XP, log on with an appropriate account that is authorized to install applications. • Network congestion may prevent the Image screen from appearing quickly. You may choose lower resolution to reduce the required bandwidth.
Internet Explorer displays the following message: "Your current security settings prohibit downloading ActiveX controls".	Setup the IE security settings or configure the individual settings to allow downloading and scripting of *unsigned* ActiveX controls.
The ICA-310 work locally but not externally.	• Might be caused from the firewall protection. Check the Internet firewall with your system or network administrator. The firewall may need to have some settings changed in order for the ICA-310 to be accessible outside your LAN. • Make sure that the ICA-310 isn't conflicting with any other web server running on your LAN. • Check the configuration of the router settings allow the ICA-310 to be accessed outside your local LAN. • Check the bandwidth of Internet connection. If the Internet bandwidth is lower than target bit rate, the video streaming will not work correctly.

The unreadable characters are displayed.	Use the operating system of the selected language. Set the Encoding or the Character Set of the selected language on the Internet Explorer.
Frame rate is slower than the setting.	• The traffic of the network and the object of the image affect the frame rate. The network congestion causes frame rate slower than the setting. • Check the bandwidth of Internet connection. If the Internet bandwidth is lower than target bit rate, the video streaming will not work correctly. • Ethernet switching hub can smooth the frame rate especially in viewing on the Multi-Camera screen.
Image Transfer on e-mail or FTP does not work.	• Default Gateway and DNS server address should be set up correctly. • If FTP does not work properly, ask your ISP or network administrator about the transferring mode of FTP server.
Miscellaneous	
Cannot play the recorded ASF file	Have installed Microsoft®'s DirectX 9.0 or later and use the Windows Media Player 9 or later to play the ASF filed recorded by the Device.

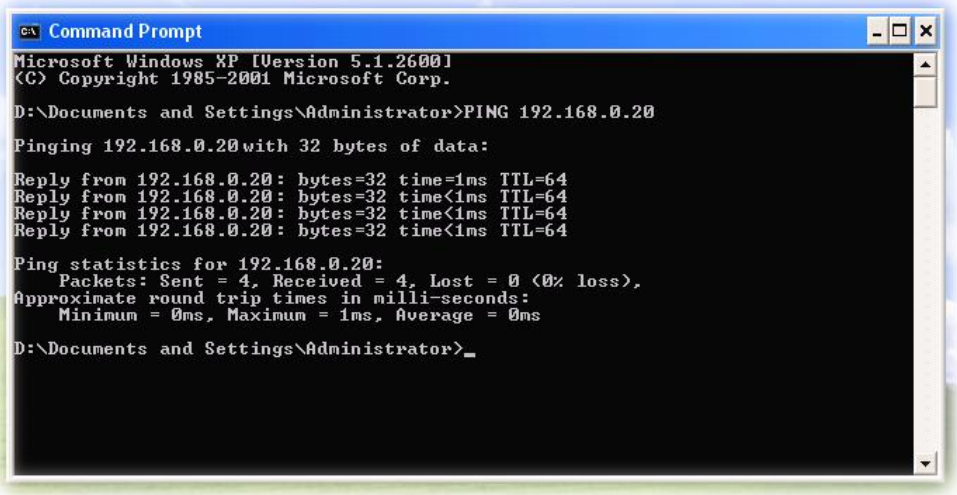
Appendix C: PING IP Address

The PING (stands for Packet Internet Groper) command is used to detect whether a specific IP address is accessible by sending a packet to the specific address and waiting for a reply. It's also a very useful tool to confirm ICA-310 installed or if the IP address conflicts with any other devices over the network.

If you want to make sure the IP address of ICA-310, utilize the PING command as follows:

- Start a DOS window.
- Type ping x.x.x.x, where x.x.x.x is the IP address of the ICA-310.

The replies, as illustrated below, will provide an explanation to the problem.


Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
D:\Documents and Settings\Administrator>PING 192.168.0.20
Pinging 192.168.0.20 with 32 bytes of data:
Reply from 192.168.0.20: bytes=32 time=1ms TTL=64
Reply from 192.168.0.20: bytes=32 time<1ms TTL=64
Reply from 192.168.0.20: bytes=32 time<1ms TTL=64
Reply from 192.168.0.20: bytes=32 time<1ms TTL=64
Ping statistics for 192.168.0.20:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 1ms, Average = 0ms
D:\Documents and Settings\Administrator>

If you want to detect any other devices conflicts with the IP address of ICA-310, also can utilize the PING command but you must disconnect the ICA-310 from the network first.

Appendix D: Bandwidth Estimation

The frame rate of video transmitted from the ICA-310 depends on connection bandwidth between client and server, video resolution, codec type, and quality setting of server. Here is a guideline to help you roughly estimate the bandwidth requirements for your ICA-310.

The required bandwidth depends on content of video source. The slow motion video will produce smaller bit rate generally and fast motion will produce higher bit rate vice versa. Actual results generated by the ICA-310 may be varying.

Image Resolution	Average range of Data Sizes for JPEG mode	Average bit rate for MPEG4 mode
160 x 120 (QQVGA)	3 ~ 6k byte per frame	64kbps~384kbps @ 30fps
320 x 240 (QVGA)	8 ~ 20k byte per frame	128kbps~768kbps @ 30fps
640 x 480 (VGA)	20 ~ 50K byte per frame	256kbps~4096kbps @ 30fps

Note: Audio streaming also takes bandwidth around 5 kbps to 64kbps. Most xDSL/Cable modem upload speeds may not even reach up to 128 kbps. Thus, you may not be able to receive any video while streaming audio on a 128 kbps or lower connection. Even though the upload speed is more than 128kbps, for optimal video performance, disabling audio streaming will get better video performance.

Appendix E: DDNS Application

1. Preface

If you have a Cable modem or xDSL, this is a great way to host your own Networked Device or other TCP/IP Service. Get your own domain like www.yourname.com, www.yourname.com.tw etc. (Note: This domain must be registered with Internic via registration authorities such as Network Solutions, DirectNIC, Register.com etc). Your domain name's dynamic IP address is automatically tracked by a DDNS server.

Host your own Networked Device and much more no matter what your computer's IP address may be and even if you have dialup, DSL or cable modem internet connection where your computer's IP address changes all the time!! DDNS service supports all top level domain names including but not limited to .com, .net, .org, .to, .uk etc.

2. Ethernet Network Environment

Normally, DDNS service is only necessary for the users that could only obtain dynamic IP addresses. As to the users that could obtain the static valid IP address, they do not usually have to apply the DDNS service. Before we decide if DDNS is necessary for the users, we have to check what kind of Ethernet network environment we have to install our Networked Device on.

(1) Environment of Fixed Valid IP Network

If users could obtain valid IP addresses, they could save the effort to apply DDNS service. Because the IP address in this environment is fixed, users could input the IP address or domain name of demo site directly in the IE browser.

(2) Environment of Dynamic IP Network

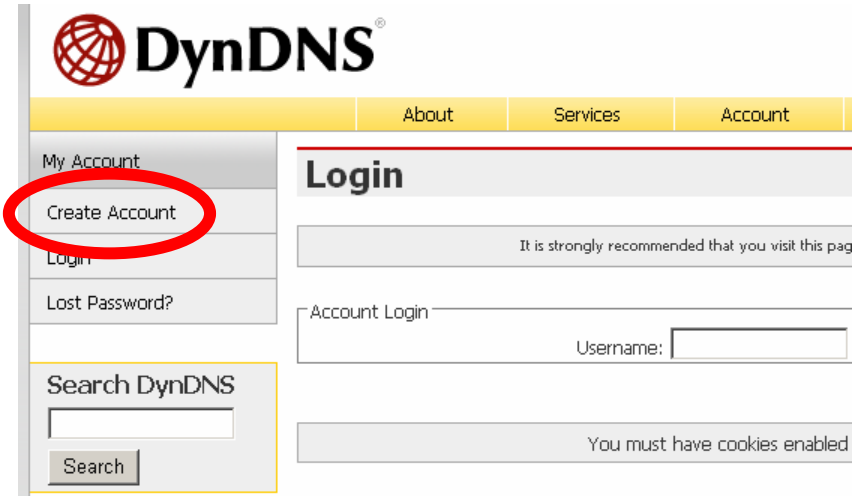
If users is under an environment of dynamic IP network (Dial-up xDSL), they have to apply a domain name in advance. Then apply DDNS service. Finally setup the necessary information of DDNS and PPPoE of the Networked Device in order to let the outside administrator be able to access through internet.

3. Application Steps – DDNS & Domain Name

(1). Visit the following web site: http://www.dyndns.org/

(2). Click “Account”

(3). After the columns show up at the left side, click “Create Account”.



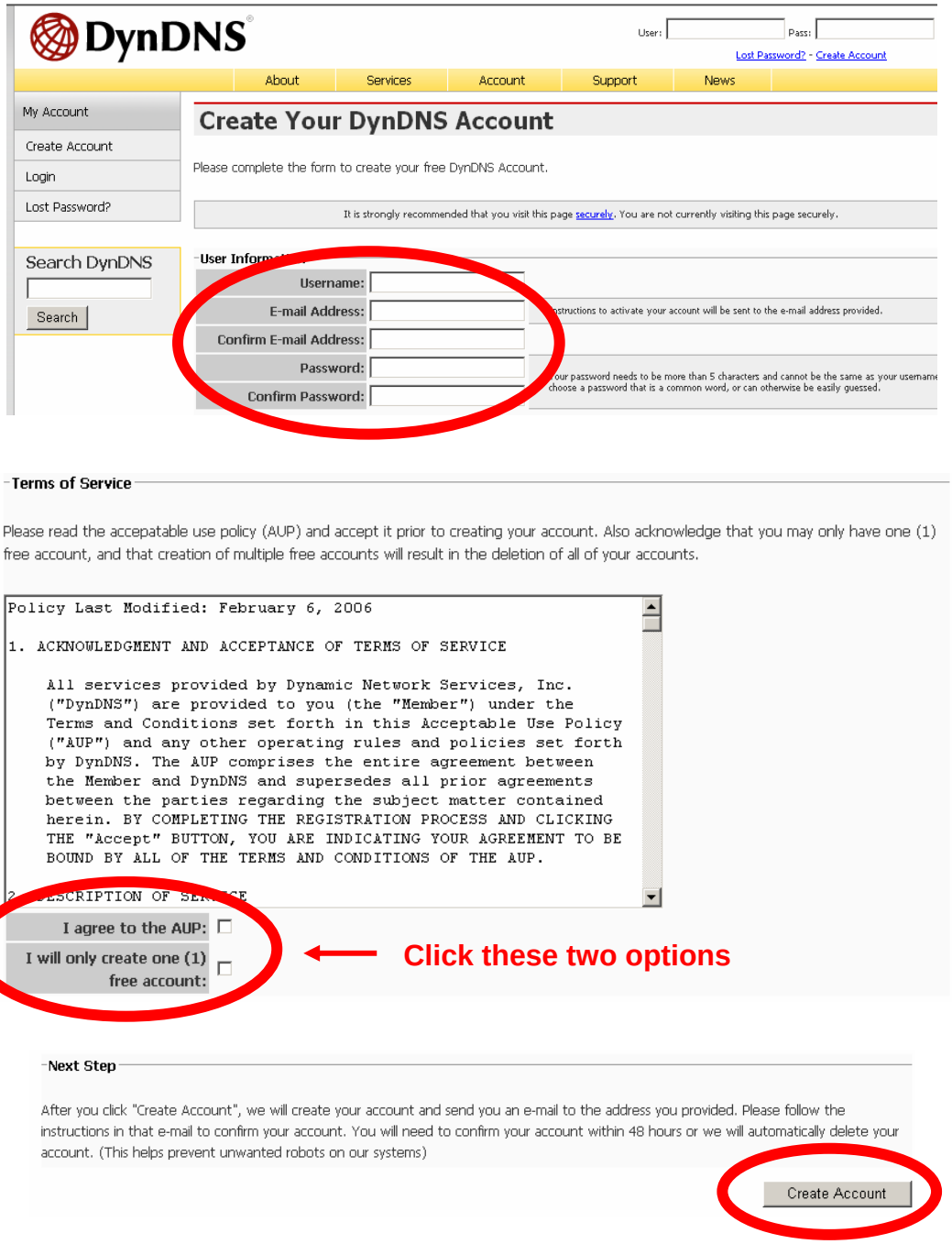
(4). Fill the application agreement and necessary information.

a. Username

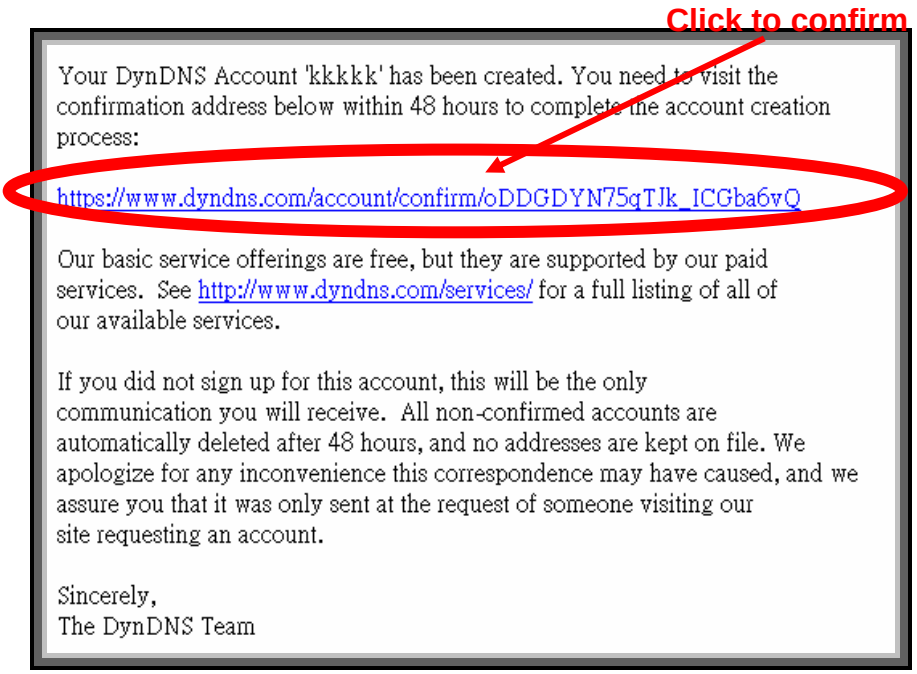
b. E-mail address and confirmation

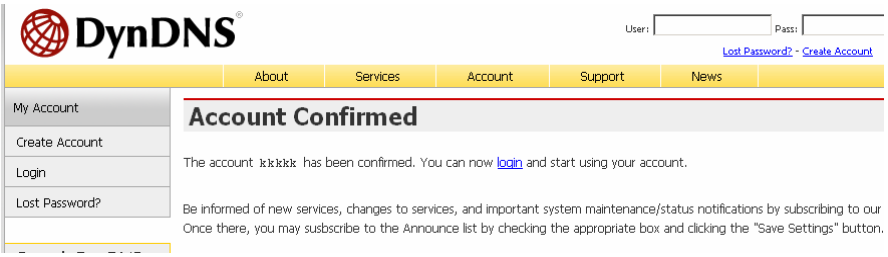
c. Password and confirmation

d. Submit all the input information and finish creating an account


DynDNS
User:
Pass:
Lost Password? - Create Account
About
Services
Account
Support
News
My Account
Create Account
Login
Lost Password?
Search DynDNS
Search
Create Your DynDNS Account
Please complete the form to create your free DynDNS Account.
It is strongly recommended that you visit this page securely. You are not currently visiting this page securely.
User Information
Username:
E-mail Address:
Confirm E-mail Address:
Password:
Confirm Password:
Terms of Service
Please read the accepatable use policy (AUP) and accept it prior to creating your account. Also acknowledge that you may only have one (1) free account, and that creation of multiple free accounts will result in the deletion of all of your accounts.
Policy Last Modified: February 6, 2006
1. ACKNOWLEDGMENT AND ACCEPTANCE OF TERMS OF SERVICE
All services provided by Dynamic Network Services, Inc. ("DynDNS") are provided to you (the "Member") under the Terms and Conditions set forth in this Acceptable Use Policy ("AUP") and any other operating rules and policies set forth by DynDNS. The AUP comprises the entire agreement between the Member and DynDNS and supersedes all prior agreements between the parties regarding the subject matter contained herein. BY COMPLETING THE REGISTRATION PROCESS AND CLICKING THE "Accept" BUTTON, YOU ARE INDICATING YOUR AGREEMENT TO BE BOUND BY ALL OF THE TERMS AND CONDITIONS OF THE AUP.
I agree to the AUP:
I will only create one (1) free account:
Click these two options
Next Step
After you click "Create Account", we will create your account and send you an e-mail to the address you provided. Please follow the instructions in that e-mail to confirm your account. You will need to confirm your account within 48 hours or we will automatically delete your account. (This helps prevent unwanted robots on our systems)
Create Account

(5). Check your e-mail mailbox. There will be an e-mail with a title “Your DynDNS Account Information“. Click the hyperlink address to confirm the DDNS service that you just applied. Then DDNS you applied activated.

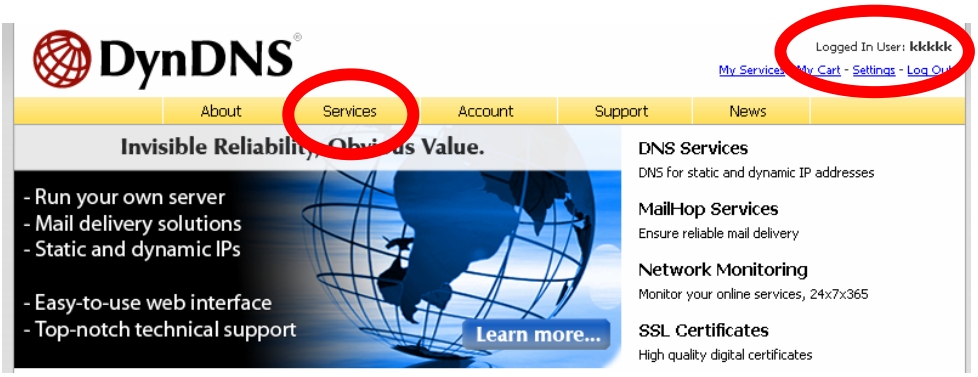

Click to confirm
Your DynDNS Account 'kkkkk' has been created. You need to visit the confirmation address below within 48 hours to complete the account creation process:
https://www.dyndns.com/account/confirm/oDDGDYN75qTJk_ICGba6vQ
Our basic service offerings are free, but they are supported by our paid services. See http://www.dyndns.com/services/ for a full listing of all of our available services.
If you did not sign up for this account, this will be the only communication you will receive. All non-confirmed accounts are automatically deleted after 48 hours, and no addresses are kept on file. We apologize for any inconvenience this correspondence may have caused, and we assure you that it was only sent at the request of someone visiting our site requesting an account.
Sincerely,
The DynDNS Team


DynDNS
User:
Pass:
Lost Password? - Create Account
About
Services
Account
Support
News
My Account
Create Account
Login
Lost Password?
Account Confirmed
The account kkkkk has been confirmed. You can now login and start using your account.
Be informed of new services, changes to services, and important system maintenance/status notifications by subscribing to our
Once there, you may susbscribe to the Announce list by checking the appropriate box and clicking the "Save Settings" button.

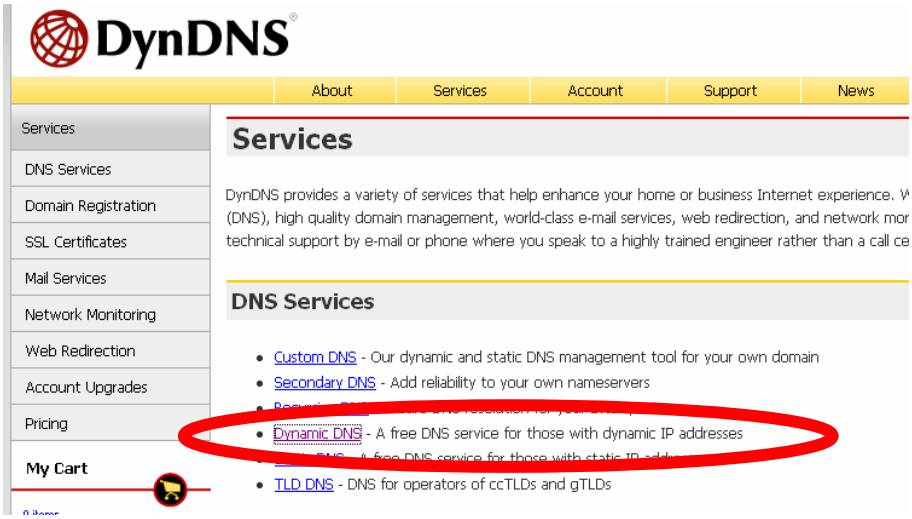
(6). Enter the web page http://www.dyndns.org/ again. Input your username and password that you just applied to login administration interface of DDNS server.

(7). If the correct username and password are input, you can see the following picture at the top-right of the login page.

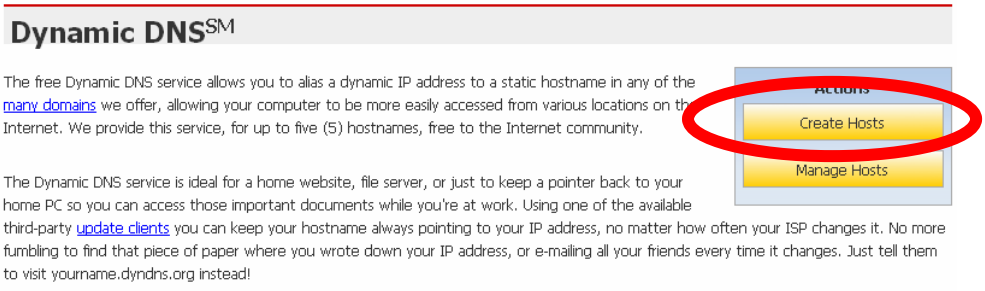
(8). Click the "Services".



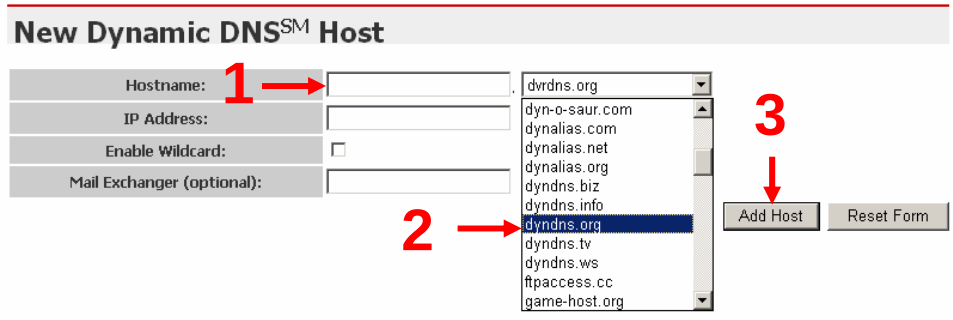
(9). Click the " Dynamic DNS ".


DynDNS
About
Services
Account
Support
News
Services
DNS Services
Domain Registration
SSL Certificates
Mail Services
Network Monitoring
Web Redirection
Account Upgrades
Pricing
My Cart
Services
DynDNS provides a variety of services that help enhance your home or business Internet experience.
(DNS), high quality domain management, world-class e-mail services, web redirection, and network mor
technical support by e-mail or phone where you speak to a highly trained engineer rather than a call ce
DNS Services
Custom DNS - Our dynamic and static DNS management tool for your own domain
Secondary DNS - Add reliability to your own nameservers
Dynamic DNS - A free DNS service for those with dynamic IP addresses
TLD DNS - DNS for operators of ccTLDs and gTLDs

(10). Click the "Create Hosts".


Dynamic DNSSM
The free Dynamic DNS service allows you to alias a dynamic IP address to a static hostname in any of the
many domains we offer, allowing your computer to be more easily accessed from various locations on th
Internet. We provide this service, for up to five (5) hostnames, free to the Internet community.
Actions
Create Hosts
Manage Hosts
The Dynamic DNS service is ideal for a home website, file server, or just to keep a pointer back to your
home PC so you can access those important documents while you're at work. Using one of the available
third-party update clients you can keep your hostname always pointing to your IP address, no matter how often your ISP changes it. No more
fumbling to find that piece of paper where you wrote down your IP address, or e-mailing all your friends every time it changes. Just tell them
to visit yourname.dyndns.org instead!

(11). We could create a domain name without any charge at this step. First, we input the host name. (No.1) Then we pick a domain that is easy to remember. Finally (No.2), click the "Add Host" to submit the domain name information. (No.3)



4. Setup the DDNS and PPPoE of Network Device

At last, users have to enter the web page of Networked Device and setup the necessary information of DDNS and PPPoE after the application of DDNS service. Please check the user manual to access the DDNS and PPPoE pages. After saving the modification, restart the device. The external users could browse the Networked Device by the input of their domain name.